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# H I J H R S

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# Logotherapy Effect Toward The Self-Esteem Among Leprosy Patients At Tadjuddin Chalid Hospital

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**Keywords:** Psychosocial, Leprosy, Logotherapy, Low Self Esteem, Lepers

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## ABSTRAK

Leprosy in the midst of society is still considered a cursed disease. The paradigm of thinking of people like this is one of the reasons why leprosy is still a fairly complex health problem to date. The purpose of this study was to determine the effect on self-esteem logotherapy leprosy patients in the Hospital Tadjuddin Chalid in Makassar. This study used a quasi-experimental. Samples were taken by non-random one group randomized design with Accidental sampling method as many as 18 lepers. Data collection used the Rosenberg Self Esteem Scale (RSES) questionnaire. Data is normally distributed by analyzing paired t-test. The results showed that the characteristics of respondents in the study group for male sex were 44.4%, female 55.5%, average age 56-55 years 44.44% and elementary school education 50.0%. The average self-esteem score before and after the intervention, where the mean + SD is 16.8 + 5.49 becomes 28.5+4.86 with p value (p = 0,000) <0.05, which means there are differences the average self-esteem score was significant before and after being given a Logotherapy Intervention. Logotherapy needs to be recommended to be used as therapy to treat patients who experience low self-esteem and Tadjuddin Chalid Hospital in Makassar City.

## INTRODUCTION

Leprosy is an infectious disease that can cause very complex problems. The problem is not only in terms of medical but also in social and economic problems. This infectious disease caused by Mycobacterium leprae that attacks the skin, peripheral nerves, mucosa of the upper respiratory tract and the eyes. Leprosy remains a health problem in some parts of the world. The problem is

not just a matter of medical terms, but also extends to issues of social, cultural, economic and national security (Hane et al., 2017).

Official records of the World Health Organization Leprosy/ Leprosy case amounting to 211,973 new cases and reported globally in 2015. The prevalence of leprosy in the world is still high (Lusli et al., 2016). World Health Organization



(WHO) recorded in 2014, a total of 213 899 new cases of leprosy detected discoveries around the world with the highest cases are in the Southeast Asian region, amounting to 154 834 cases (Kaehler et al., 2015). The prevalence of leprosy at the beginning of 2015 found 0.31 per 100,000 population. Indonesia is ranked third in the country with the most endemic leprosy after India and Brazil (WHO, 2016)

World Health Organization (WHO) states that the number of leprosy cases in the world until March 2013 as many as 189 018 cases, with the number of new cases in the year 2012 as many as 232 857 cases. According to official data from the state health department endemic leprosy detection performed globally each year showed a decrease in cases since 2001, a decline of cases up to more than 46%. In 2004 there were 407,791 new cases and continued to decline to 228,474 cases in 2010 and as many as 219,075 in 2011 (Rukua et al., 2015).

Leprosy sufferers are often stigmatized as a result of adverse social assessments of their illness. The stigma against leprosy affects the quality of life of people affected by leprosy, an understanding of the disease they experience and self-acceptance for the sufferers themselves (Putri et al., 2016).

Leprosy patients will mostly have low self-esteem, trying to avoid other people, do not like the changes in his body, and was reluctant to leave the house (Nauli, 2012). Lepers who experience low self-esteem and are included in the adult age group of 26-45 years of age (Prihandini, 2017). Intelligence factors are also included to be one of the causes of

low self-esteem to a person, since leprosy is closely connected with the knowledge factor that patients have low knowledge about leprosy. Lepers with a high knowledge will have adaptive coping mechanisms so that low self-esteem does not happen (Muharry, 2014).

Logotherapy is psychotherapy that can see individuals clearly and holistically that includes self-image, self-confidence and individual ability to deal with stress and is a therapy for how clients determine their own choices that are responsible for their lives in order to achieve a meaningful life (Robotmili et al., 2015; Nauli, 2012). Therefore the purpose of this study was to determine whether there was an effect of Logotherapy therapy on the control of self-esteem levels in leprosy patients in Makassar's Tadjuddin Chalid Hospital.

## **METHOD**

### ***Research Design and Location***

The study was conducted at Tadjuddin Chalid Hospital in Makassar City. This study uses quasi experimental. the sample was taken non-randomized pre post-test one group design with accidental sampling method.

### ***Population and Sample***

The population in this study were all outpatient leprosy patients at Tadjuddin Chalid Hospital in Makassar City. A sample of 18 patients with leprosy selected by accidental sampling that have met the inclusion criteria that leprosy patients aged 20-65 years, the patients who live in the city of Makassar, can communicate well, not impaired vision and hearing loss, as well as willing to sign an informed consent that



has been issued by the Ethics Committee of the Faculty of Public Health, Hasanuddin University.

### Data Collection

Data collection in this study was carried out by the researchers themselves by distributing questionnaires or interviewing respondents during the pre-test and post-test. The measuring instrument used is measuring the level of self-esteem using the RSES (Rosenberg Self Esteem Scale) measuring instrument. RSES is a reliable measurement tool to measure self-esteem quickly and accurately that consists of 10 items of questions. In the control group,

a pre-test was given and then logotherapy was given after a few weeks ago a post-test was carried out while in the control group the pre-test and post-test were given simultaneously in the same week as the intervention group.

### Data Analysis

Logotherapy intervention was carried out 3 (three) times then post-test after the third intervention. Data is processed using STATA, to assess the effect of Logotherapy intervention on controlling the level of self-esteem Logotherapy using paired t-test.

## RESULTS

**Table 1. Characteristics of Patients with Leprosy Before Logotherapy at Tadjuddin Chalid Hospital**

Characteristics	Before (Pre-test)		Total N (%)
	Low self-esteem n (%)	High self-esteem n (%)	
<b>Age (years)</b>			
25 – 35	3 (21.4%)	0 (0.00%)	3 (16.7%)
36 – 45	3 (21.4%)	0 (0.00%)	3 (16.7%)
46 – 55	3 (21.4%)	1 (25.0%)	4 (22.2%)
56 – 65	5 (35.7 %)	3 (75.0%)	8 (44.4%)
<b>Gender</b>			
Male	6 (42.9%)	2 (50.0%)	8 (44.4%)
Female	8 (57.1%)	2 (50.0%)	10 (55.6%)
<b>Education</b>			
Unschoolled	6 (42.9%)	0 (0.00%)	6 (33.3%)
Elementary School	5 (35.7%)	4 (100%)	9 (50.0%)
Junior High School	0 (0.00%)	0 (0.00%)	0 (0.00%)
High School	3 (21.4%)	0 (0.00%)	3 (16.7%)
<b>Occupation</b>			
Not Working	6 (42.9%)	2 (50.0%)	8 (44.4%)
Farmer	0 (0.00%)	1 (25.0%)	1 (5.56%)
Housewife	8 (57.1%)	1 (25.0%)	9 (50.0%)
<b>Marital status</b>			
Merried	6 (42.9%)	2 (50.0%)	8 (44.4%)
Single	3 (21.4%)	1 (25.0%)	4 (22.2%)
Widow	5 (35.7%)	1 (25.0%)	6 (33.3%)

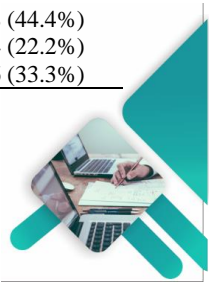


Table 1 and Table 2 is an analysis of the characteristics that made crosstabulation with leprosy patient level of self-esteem. The table showed that the majority of leprosy patients aged between 56-65 years as many as 8 people (44.4%) that is the age group. The sex of the respondents was dominated by women as many as 10 people (55.6%)

and the highest level of education, the elementary school level as many as 9 people (50%), the highest number of occupations was 9 people (50%) with the most marital status married as many as 8 people (44.4%). Respondents were given pre-test and post-test before and after the Logotherapy intervention.

**Table 2. Characteristics of Patients with Leprosy After Logotherapy at Tadjuddin Chalid Hospital**

Characteristics	After (Post-test)		Total N (%)
	Low self-esteem	High self-esteem	
	n (%)	n (%)	
<b>Age (years)</b>			
25 – 35	1 (50%)	2 (12.5%)	3 (16.7%)
36 – 45	0 (0.0%)	3 (18.8%)	3 (16.7%)
46 – 55	0 (0.0%)	4 (25%)	4 (22.2%)
56 – 65	1 (50%)	7 (43.8%)	8 (44.4%)
<b>Gender</b>			
Male	2 (100%)	6 (37.5%)	8 (44.4%)
Female	0 (0.00%)	10 (62.5%)	10 (55.6%)
<b>Education</b>			
Unschoolled	0 (0.00%)	6 (37.5%)	6 (33.3%)
Elementary School	1 (50.0%)	8 (50.0%)	9 (50.0%)
Junior High School	0 (0.00%)	0 (0.00%)	0 (0.00%)
High School	1 (50.0%)	2 (12.5%)	3 (16.7%)
<b>Occupation</b>			
Not Working	2 (100%)	6 (37.5%)	8 (44.4%)
Farmer	0 (0.00%)	1 (6.25%)	1 (5.56%)
Housewife	0 (0.00%)	9 (56.3%)	9 (50.0%)
<b>Marital status</b>			
Merried	2 (100%)	6 (37.5%)	8 (44.4%)
Single	0 (0.00%)	4 (25%)	4 (22.2%)
Widow	0 (0.00%)	6 (37.5%)	6 (33.3%)

Table 2 was obtained that the dominant age group had the highest self-esteem at the age of 56-65 years at 43.8%. for the highest sex who had high self-esteem was a woman of 62.5% & for

men 37.5%. At the education level more dominant at the elementary level is 50% who have high self-esteem and the other 37.5% are not in school. High self-esteem is also more dominant in the



housewife group of 56.3% and those who do not work as much as 37.5% of them are married and unmarried and the

marital status that has the highest self-esteem in the post-test is the married and widow status each of that is 37.5%.

**Table 3. Difference in Self-Esteem Score of Patients with Leprosy Before and After Logotherapy (Pre and Post-test) at Tadjuddin Chalid Hospital**

Self- Esteem Score	Leprosy Patient (n=18)				
	Mean	Min-Max	±SD	Shapiro Wilk	Paired t test
Pre-test	16,8	9 - 26	5,49	0,317	0,000
Post-test	28,5	17 - 35	4,86	1,219	

Table 3 showed the average value of self-esteem scores in the pre-test 16.8  $\pm$  5.49 with min-max (9-26) and after logotherapy three times the post-test was given. The average score of the self-esteem score was 28.5  $\pm$  4.86 with min-max (17-35). Table 3 showed that the respondents' self-esteem scores need to be tested for normality using the Shapiro Wilk test to find out the differences/ variations in the average score of self-esteem that are spread evenly so that the normal distribution for data is <50 samples. After being tested for normality using Shapiro Wilk. The results of the analysis showed that self-esteem scores before and after logotherapy were normally distributed with values of 0.317 and 1.219 > 0.05. Because the data is normally distributed. The t-test is done in pairs with the results of the analysis showing that there are differences in self-esteem scores before and after being given Logotherapy with p-value 0.000.

## DISCUSSION

Based The results of a preliminary study conducted by researchers at the Tadjuddin Chalid Hospital illustrate that

most leprosy patients increase their self-esteem problems, where the price of low self-response is identified in people who refuse leprosy. In this study the results showed that there were significant differences in self-esteem scores before and after being given logotherapy in leprosy patients at Tadjuddin Chalid Hospital in Makassar City.

The study stated that leprosy patients who had low self-esteem were the age group of 25-56 years and most of them were female with the highest level of education at the elementary school level, most of the leprosy patients were also married and some had not married status either never been married or widow, some of the respondents were housewives for women and those who were male preferred not to work due to illness.

The early adult age group (26-35 years) is included in the productive age that is in the age range between 15-64 years. Early adult age groups (26-35 years) are transitional periods and individuals have the freedom to choose to be free from dependence on others and become more independent, determine their own way of life towards the situation





and expectations of their social environment (Maryatun, 2011).

Intelligence factors are also included as one of the causes of low self-esteem in a person, considering leprosy is very closely related to knowledge factors where sufferers have low knowledge about leprosy (Muharry, 2014). Lepers with high knowledge will have adaptive coping mechanisms so that low self-esteem does not occur (Saputri et al., 2017) One family function is a function of care as a study conducted by Roosihermiatie in 2006 revealed that unmarried status has a significant positive relationship to patients who have disabilities (Alimansur et al., 2016).

Logotherapy teaches individuals to discover the meaning of their lives even in difficult times (Mohammadi et al., 2014). This statement means that even in difficult situations, someone is expected to have hope for a happy life. The desire to have meaning / meaning in his life will make someone fill their days with activities that are beneficial for themselves and their future (Erlangga, 2017). Low self-esteem indicates self-denial and self-hatred that is conscious or unconscious, where low will also cause individual productivity to decline due to the condition (Hamid et al., 2014).

Before the logotherapy intervention, leprosy patients tend to experience low self-esteem with a score of  $<20$  and after being given logotherapy the self-esteem score increases to high self-esteem, with a score of  $> 20$ . Thus it can be said that logotherapy can control self-esteem in leprosy patients who experience low self-esteem. In line with the research conducted by Rochmawati et al (2017), it

was shown that giving logotherapy to the elderly had an impact on increasing the self-esteem of the elderly from low to high, that was 22 respondents (73%).

The results of Prihandini (2017) study also showed that after intervention the administration of logotherapy showed a significant value of 0,000 where  $p < 0.05$  that means there was a difference in changes in self-esteem of leprosy patients before and after logotherapy.

## CONCLUSION AND SUGGESTION

Based on the results of the research and hypothesis, it can be concluded that there are significant differences in the level of self-esteem of leprosy patients before and after the intervention is given, so that logotherapy is stated to control the level of self-esteem of leprosy patients. Efforts to control the level of self-esteem of leprosy patients, health workers and leprosy rehabilitation centers are recommended not only to focus on providing pharmacological drugs, physical rehabilitation or injuries, but also to apply logotherapy in an effort to increase self-esteem, self-confidence and enthusiasm in dealing with community stigma.



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# Adolescent Perception of Genre Related to Early Childhood Marriage In Kabalutan Island Central Sulawesi

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## ABSTRAK

Adolescent perceptions of early childhood marriage are responded positively or negatively because of the high sexual urges of teenagers because of permissive and almost unlimited environmental influences. The Planning Generation Program (GENRE) which is focused on adolescents is expected to be an innovative solution for the community, especially families with teenagers. This study aims to analyze the perceptions of adolescents about the acceptance of the GENRE concept related to early childhood marriage on Kabalutan Island. This research is a qualitative research with an explanatory approach. Data collection was conducted with Focus Group Discussions and in-depth interviews as well as observations on 14 informants consisting of teenagers who were early marriages and not early marriages, parents of teenagers who had married early and parents of unmarried teenagers and local community leaders consisting of officers health and teachers. To obtain the factors that drive teenagers' perceptions, the data are analyzed using taxonomic analysis. This study has succeeded in identifying the perceptions of adolescents about GENRE and early childhood marriages on the island of Kabalutan. The family environment and socio-culture of the local community and the interventions provided by some Parties provide a diverse understanding of adolescents. Therefore, it is recommended for cross-sector stakeholders who are interested in equating perceptions and joint interventions so that the acceptance of GENRE can be maximized in overcoming early marriage.

## INTRODUCTION

Early childhood marriage is a wedding performed by a spouse or one of its partners is still categorized as a teenager under the age of 19 (UNICEF, 2005). A variety of studies show that girls who are married at an early age have a high risk of experiencing anxiety, depression, or have a suicidal mind, some of that can be caused they have no

status, power, support, and control over their own lives (Raj, 2010).

Early-age marriages give greater risk to girls especially on the reproductive health aspects (Landung et al., 2009). Girls aged 10-19 years have a risk of five times greater death in cases of pregnancy and childbirth than females aged 20-24 years, and globally deaths caused by



pregnancy are the leading cause of child mortality Women aged 15-19 Years (BPS and UNICEF., 2016).

Tsani said, early childhood marriage was responded positively or negatively. This is due to the high adolescent sexual drive due to the permissive and almost limitless environmental influences. In the end physically, the child can be faster mature and mature. But if it is considered psychic, economic, religious, social or other forms of self-reliance, early marriage is not necessarily able to build a new community named family (Tsani, 2012).

Early childhood wedding in Kabalutan Island including the height of 30%. The island with an area of 15.13 km<sup>2</sup> has a population of 2.295 people with the largest distribution in the age group of 10-24, that is 38% of the total population and most of the society is the Bajo tribe. Based on preliminary study results, the high cause of early childhood marriage is broadly caused by two things. Firstly, most parents have an understanding when the child can make their own money already considered as adults and second youth who have had income, his role is no longer getting supervision from parents (BKKBN, 2017).

In research conducted National Population and Family Planning Board central Sulawesi province mentions children's marriage in SULTENG has reached 31.91% in the year 2015 (BKKBN, 2017). Data on BPS 2016 showed, one of the highest donors is Tojo una-una district by 23% (BPS and UNICEF, 2016).

Based on data BPS 2018, 27.09% of women aged 16-20 years have married, marry before the age of 18 years and the child's marriage very early (marriage before age 16 years between all ages 12-20 never married) of 2.5%. West Sulawesi Province, Papua, central Sulawesi, South Sulawesi, and West Papua are the five provinces that have the highest average for the percentage of children under 15 years of age (BPS and UNICEF, 2016).

Regarding the problem of adolescents the GENRE is considered present as a solution. This Program has the concept of postponing the age of marriage (women 21 years, 25-year-old males) through four substance. First population and family development is the granting of information access, education, counseling and service about family life; second adolescents ' reproductive health, i.e. giving KIE-related sexuality to HIV/AIDS; third life skills i.e. education about the general life skills and the fourth planning of family life by providing the right and true information about family life and the concept of family (Yulianti, 2017).

GENRE uniqueness is on the service of adolescent reproductive health counseling conducted by peer counselors/educators, where the GENRE is expected to be an effective educational media regarding adolescent reproductive health issues and others positively research result (2014) suggests that peer-to-peer education can increase the knowledge of the adulthood of marriage in adolescents, both in the Ministry and Rural (Follona et al., 2014).



Based on the issue is expected to study on the prevention of Early childhood marriage through adolescent health education. Researchers also wanted to find out how adolescent perceptions of the concept of the GENRE is in early-age marital issues.

## METHOD

### *Research Design and Location*

The research was conducted on the island of Kabalutan Talatako district of Tojo una – una of central Sulawesi. The type of research used is qualitative with an express approach.

### *Population and Sample*

The informant election techniques in this study were purposive based on the criteria of the specified-criteria. The informant consists of teenagers, teenage parents, community leaders. The characteristics of the informant are teenage do early childhood, unmarried youth, parents of young adults both early marriage and un marriage and informers of community leaders are family planning field officer and school teachers.

### *Data Collection*

Secondary Data is obtained by collecting information and documents from BP2KB District Tojo una – una, district family planning field officer Talatako and Kabalutan Village office. Primary Data is obtained by a focus group discussion and an in-depth interview to each of the informant by asking questions in the form of interview guidelines.

### *Data Analysis*

The data analysis techniques used in this study were conducted with a

taxonomy analysis to show more connections between something within the cultural domain.

## RESULTS

Table 1 showed that the characteristics of the informants consists of teenagers who married early or not, on average teenagers under 19 years and high school education (graduated or not), the main informants were 8 teenagers.

**Table 1. Characteristics of Teenage Informants In Kabalutan**

Informant	Gender	Age	School
<b>CN</b>	W	17 Year	High School
<b>GT</b>	W	15 Year	Junior High School
<b>WT</b>	W	19 Year	High School (not finished)
<b>PP</b>	W	18 Year	High School (not finished)
<b>WD</b>	W	19 Year	High School (not finished)
<b>WD</b>	M	23 Year	High School
<b>SR</b>	M	17 Year	High School
<b>MB</b>	M	19 Year	High School

Table 2 showed the characteristics of the supporting informants are parents of teenagers who have married early or not, health workers /Family Planning Field Officer (PLKB) and the school or teacher. Supporting informants were 6 people.

The results showed that the perception of teenagers is strongly influenced by whether or not to have an early marriage or the GENRE. Findings in this study based on the results of the



focus group discussion and in-depth interviews indicated perception of

adolescents into three domains.

**Table 2. Characteristics of Toma informants and parents in Kabalutan**

Informant Code	Gender M/W	Age (year)	School	Occupation
SL	M	31	Bachelor	PLKB
MM	M	46	High School	Teacher
WK	M	30	High School (not finished)	Fisherman
NL	W	24	High School	Housewife
AJ	M	40	No School	Fisherman
IS	W	35	No School	Housewife

**Domain perception of seriousness**

Adolescent informant is largely aware of the GENRE through counseling conducted by healthcare officers. The information they get indicates a perception of seriousness that is believed to be a risk to themselves.

(PP, 18 Year)

*“...dibilang disitu tentang narkoba bahaya, beken rusak torang pe otak torang pe masa depan, so itu kita te mau ba iko-iko ba obat biar saja dorang, tapi kalu barokok, iyo ada...”*

The perception of the seriousness of adolescents believes that the threat of reproductive health threats due to early marriage will have a serious impact on them. The informant also revealed that early marriage events could occur if the incidence of pregnancy outside marriage and average knowledge about the definition of early marriage, but in terms of the minimum age limit for marriage is still varied.

(It is said that drugs are dangerous to damage the brain and future, so I do not want to take part just let them, but if I smoke yes)

(SR, 17 Year)

*“...pernah juga itu pak ba kase penyuluhan, dia bilang torang anak-anak skola ini jangan dulu capat kawen, bagus kalo so umur 20 lebe sama-sama...”*

*“...kalu depe parampuan bulum cukup umur, kalu macam GENRE itu 20 ka bawah...”*

(If the woman is not old enough, if in that GENRE under the age of 20)

(CN, 17 Year)

(Mr. PLKB gave counseling, he said we are not used to be fast – quickly married, preferably if it is 20 years old and above)

*“...orang yang so kawen tapi umur anak-anak, macam ada itu yang 15 Year...”*



(People are married but still children, such as the age of 15 years)

(PP, 17 Year)

### **Domain Drive Acting**

*“...itu GENRE gaga, pak yang dari KB pernah datang ka skola, dia kase penyuluhan tentang bahaya parampuan hamil kalu masih anak-anak, nanti umur 20 lebe bagitu baru bagus, ada kita pe taman so kawen kon mau melahirkan siksa, so itu kita te mau capat-capat ba kawen kon hamil...”*

(Good GENRE, Mr. PLKB never come to school convey counseling about the dangers of pregnant women if still children, later than 20 years and above preferably, there is a friend I give birth is difficult to come out, therefore I do not want to quickly marry and conceive)

(CN, 17 Year)

*“...pernikahan yang kalu so terjadi apa-apa, macam so ta salah duluan...”*

(the marriage that occurred when it was pregnant first)

(WD, 19 Year)

Based on the perceived seriousness of the dangers of early childhood marriages, some informant believes to avoid early childhood marriage but there are also informants who reveal the seriousness of the occurrence of pregnancy outside the marriage then Early childhood marriage is an inevitable solution.

### **Domain Self-confidence**

The informant reveals the requirement a person is said to be worthy of marriage is if the woman is good at caring for the household and men – men already have a job. It is a self-confidence for teenagers to feel appropriate or not his butt to marry.

*“...harus cukup umur dulu, tau urus rumah tangga, urus suami, suami harus punya pekerjaan...”*

(must be old enough to take care of the household, take care of the husband, must have work)

(CN, 17 Year)

*“...harus terima keadaan laki biar laki mau susah ato sanang te boleh mau ba kalae...”*

(must accept the condition of husband in a State of difficult and seang quarrelsome)

(PP, 19 Year)

The perception of most teen informant on the island of Kabalutan on the terms of marriage is influenced by the family environment of parents. Older parents of early childhood marriages understand the concept of marriage is merely the unification of two people who love each other and have been deemed appropriate to enter the period of puberties.

*“...ehh disini ini kalu parampuan so ba haid kong cuma kasana kamari te ada*





*depe laki lebe bae dikase kawen, supaya abis orang pe carita...”*

(Eh here if the girl had menstruation only way here and there is no husband better married, Aga no negative stories of peoples)

(IS, 35 Year)

## DISCUSSION

Adolescent perceptions regarding GENRE concept are only at the stage of understanding counseling material. This is because the GENRE socialization process is considered to be not maximal even though it has been carried out with the school and health center care.

Adolescent perceptions on Kabalutan island regarding the minimum age limit for marriage are still varied. This is not independent of the intervention carried out by several parties. The local Office of Religious Affairs conducted a socialization based on the Marriage Law number 1 of 1974 that said the minimum age for marriage was male – male 19 years and female 16 years, while the health workers are based on the GENRE concept of 20 years in women and 25 years in men. The varying understanding of the age limit of marriage is said by health informants to cause the maximum acceptance of GENRE both on the part of the teenagers and the teenagers themselves. Another thing is the need for adolescent counseling has not been fulfilled due to inadequate infrastructure

Audina et al (2016) said that giving information that is lacking can cause low knowledge of adolescents that results in making perceptions about early marriage

become natural Adolescents have an assessment of the health care system they will use. This assessment will lead to an attitude of acceptance or rejection of the utilization of reproductive health service centers (Arie et al., 2011).

Health care services for adolescents according to the perspective of adolescents need a comfortable service place, that is a closed room, a comfortable atmosphere, secrets can be maintained. Besides at school, support for the family environment in this case parents and the social environment in this case the environment of residence and adolescence itself. Counseling services provided to adolescents will be effective by involving various elements, i.e. adolescents, families, in this case parents, schools, especially Counseling teacher and school health unit, as well as the community in the neighborhood (Rohmayanti et al., 2015).

Rural communities tend to familiarize themselves with early childhood, so that it becomes a culture that is continuously carried out and considers early marriage as a starting point to be separated from the moral and economic burden of the family. To create its own values to avoid negative talk of the community environment. Marriage is only seen as a mere biological need, not seeing the aspects of impact in a social and healthy manner. Force in carrying out the reality of early marriage due to the stigma that develops and will develop in the community (Hidayatullah et al., 2018).

Parents who have limited perceptions are based on the limitations of specific understanding of reproductive



health and children's rights, so the tendency is to marry off their children. Parents have a big role in the occurrence and delay of marriage at a young age (Arimurtti et al., 2017).

Open communication between parents and their children will lead to the closeness of parents and their children, so that teens can share their problems with parents and can get the right information about safe behavior in living their lives, teens will also know good things or things they must avoid (Lianawati et al., 2018).

## CONCLUSION AND SUGGESTION

There are various adolescent perceptions of each who believe the seriousness of the risk of getting married early, but there are also those who believe in the seriousness of the risk if pregnant out of wedlock and not married. Differences in teenagers' perceptions of the minimum age limit for marriage are due to interventions with different references. The party of religious affairs office based on Marriage Law of 1974 stated the minimum age of marriage for men is 19 years and women are 16 years and family planning field officer based on GENRE concept where it stated the minimum age of marriage for men is 25 years and women are 20 years.

Adolescents' self-confidence regarding the seriousness of being pregnant out of wedlock makes early marriage an unavoidable solution and adolescent self-confidence regarding marriage requirements is influenced by local socio-culture.

Based on the results of this study, first recommended to make Kabalutan island as a target area with the priority of adolescents and families group to reduce early marriage. Second, in order to family planning field officer and religious affairs office intervened together so that the programs implemented could mutually support GENRE.



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# Traditional Medical Systems In Handling Children Diseases Among Tolotang Community In Sidrap Regency South Sulawesi

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## ABSTRAK

Tolotang community still uses traditional medical in handling children diseases, this inseparable from cultural influence on Tolotang community which is so firm in maintaining customs and beliefs adopted. This study aimed to analyze the resources consisting of facilities, accessibility, and skills that used by the Tolotang community in handling diseases of under five children. This study used qualitative methods with ethnographic designs. The selection of informants used the snowball method by collecting data through in-depth interviews with 28 informants. Data was analyzed by content analysis and it was interpreted and presented in form of narratives, matrices, and schemes. The results showed that resources in the form of facilities such as community health center, auxiliary community health center, village health post were available and can be reached by the community. Several plants are available in the surrounding environment such as betel leaves, turmeric and, bangle that were used by the community as the first traditional treatment of illness children before bringing it to a health care facility. It is expected that the Sidrap Health Office can maximize the implementation of traditional health in health centers so that the traditional health services obtained by the community are more directed with minimal risks.

## INTRODUCTION

The problem of children diseases is a very complex problem in a family. Indonesia out of every 1,000 births, 40 of them will die before they are 5 years old. Indonesia's under-five mortality rate is the highest in other ASEAN countries, 4.6 times higher than Malaysia, 1.3 times higher than the Philippines and 1.8 times

higher than Thailand (Amiruddin, 2015).

Diseases affecting children under the age of 2013 based on Hospital Information System (SIRS) data, diarrhea & gastrointestinal by certain causes of infection (36.58%), YTT seizures (11.260%), URI (11.043%), typhoid and paratyphoid fever (9.747%), pneumonia



(9.180%), fever (6.885%), DHF (6.303%), Other abnormal clinical and laboratory symptoms, signs and findings (3.472%), dehydration (2.975%), anemia (2.856%), and dengue fever (2.770%) (Kemenkes RI, 2015).

Concept of the incidence of disease depends on the type of disease. Human behavior and way of life can be the cause of various kinds of diseases both in primitive times, as well as in very advanced society, civilization and culture. Thus efforts to overcome them in the search for health services depend on their belief in the causes of diseases (Marimbi, 2009).

Medical systems are a number of parts that are interrelated and systematic in providing health services. Medical systems are an integral part of the culture that develops in society, thus there is a variety of medical systems that are developing in the world. Diversity of medical systems can refer to modern, traditional, and medical systems that are based on religious values or cultural values (Sudarma, 2009).

As primary health care, the Siddha traditional medical system applies in the states of South India, especially in Tamil Nadu. Local people in the area use a number of plants for medicines with appropriate training obtained from their ancestors and also from several sources of ancient textbooks. A total of 116 plant species from 49 families and 103 general were recorded to treat 73 types of diseases. Among the plant parts used for medicine preparation, the leaves are often used as the dominant medicine preparation (Krupa et al., 2018).

Research conducted by Oliver (2013) in Australian Aboriginal communities suggests that reciprocity and cultural sensitivity are very important in health care, such as using spiritual or magic treatment and the use of traditional medicines that are thought to be able to relieve symptoms of the cause of the disease for various diseases. Like to deal with colds and flu, wounds, headaches, muscle aches and skin rashes.

Traditional handling of plants uses such as handling measles. In Indramayu mothers treat it by lining up children with kawak acid, drinking honey and lime or giving suwuk leaves, that according to belief can suck up disease (Marimbi, 2009).

In the Sidenreng Rappang (Sidrap) area of South Sulawesi, there is a Tolotang community known as the Bugis tribe who are very clever in maintaining ancestral heritage. Tolotang community is very firm in maintaining the customs, culture and beliefs that are adopted. The community is quite proud of their leaders who came from the Sawerigading descendants (Bugis ancestors) or La Panaungi who have the title Uwa 'or Uwatta (Darmapoetra, 2013).

Different beliefs certainly affect different thinking and behavioral patterns. This will also affect the community or individuals in maintaining their health. Thus, this study aims to analyze the resources used by the Tolotang community in Sidrap Regency in handling children diseases.



## METHOD

### *Research Design and Location*

This research was conducted in the work area of Manisa Health Center and Amparita Health Center on March 22 to May 7, 2019. The type of research used was a qualitative research with an ethnographic approach.

### *Informant*

The informant selection method used is the snowball method, that is a data retrieval method that will discuss a little longer, it will become big, informants in this study were 28 people consisting of 8 traditional children healer, 9 children/ families, 7 health workers and 4 people traditional leaders/ community leaders.

### *Data Collection*

The method of data collection in this study is by in-depth interviews and observations of the in-depth interview process. To guarantee and reflect the accuracy of the information gathered, researchers used triangulation techniques and sources. The researcher is one of the instruments in this study. To obtain facts in the field, researchers equip themselves with interview guidelines, documentation tools (voice recorders and cameras) and field notes.

### *Data Analysis*

The process of data analysis in this study is to collect all data from interviews according to the variables included in the research. The data analysis technique used is content analysis and then interpreted in the form of narratives, matrices, and schemes.

## RESULTS

The informants in this study were 28 people, consisting of traditional leaders/ community leaders 4 people, 8 traditional children healers, 9 parents/family of child, and 7 health workers (5 midwives and 2 BATRA managers). The age of the informants interviewed ranged from 30 to 84 years.

Resources are a supporter in the behavior of a person or society. The resources in this study are the availability of health care facilities, the use of plants in the surrounding environment that are used in traditional medicine and the skills of traditional healers as well as parents/families of children under five in using it to overcome this disease in children in Tolotang community. Based on in-depth interviews with research informants, it was found that informants knew about the health care facilities available in Manisa Village, as follows:.

*“See, Manisa Health Center and Auxiliary Community Health Center in Tangkoli”*

(RS, Parent of child, 30 Years old)

Likewise, the informants at Amparita know about the available health service facilities, as the following informant phrases:

*“Here there is a health center with hospital, there is a village midwife and village health post if you want to bring your child to treatment”*

(AN, Parent of child, 29 Years old)



The answers from health workers regarding the availability of health service facilities in the work area of Manisa Health Center and Amparita Health Center are as follows:

*“If the surrounding of Manisa Community Health Center is divided into 3 regions, there are what are said to be Manisa village, Panreng village, and Benteng village. In the Manisa village there is village health post, in the pareng there is village health post panreng, and in Benteng there are village health post and auxiliary community health center”*

(ST, Health worker, 29 Years old)

*“There are 9 village midwives, 2 auxiliary community health center, 3 polindes, 4 village health post. In the Amparita Polindes village, it is open 24 hours. Usually, if a sick child is taken to a village health post first and then asked to the community health center depending on the disease”*

(NI, Health worker, 32 Years old)

Based on observations at the research location, it can be seen that health service facilities in Manisa and Amparita Villages are available such as the existence of community health center, village health post and auxiliary community health center. Meanwhile, the accessibility can be reached because the distance is not too far from the area where the Tolotang community lives. Especially in the Tolotang community in Manisa village, it is known that the community occupies a certain area in the Manisa

Village, but access to health services can be reached, especially the village health post located in the surroundings.

In addition to the availability of health care facilities, as well as plants available in the surrounding environment such as betel leaves, turmeric and bangle that are used by the community as the first traditional treatment if the child is affected by illness before bringing to health care facilities. Based on the results of interviews with research informants, the most frequent use of herbal plants in handling childhood diseases is using a mixture of turmeric, as follows:

*“For the disease there must be turmeric, candlenut, betel leaves for kedo ise 'also using chicken eggs and marble in a bugis. If the fever persists, after that the fever could be dropped”*

(WA, Community leaders, 72Years old)

Betel leaf is also used for most treatment mixtures in the treatment of traditional children diseases because it is easily obtained in the surrounding environment, one of its functions is to overcome the fever suffered by children, such as the following that interview:

*“Betel leaves are used to reduce the heat of children mixed with water, because betel leaves can be found in the surrounding environment”*

(IT, Community leaders, 66 Years old)

Other informants said that bangle is also often used for treatment if it is mixed with other ingredients and some plants





used in handling other diseases, as the following informant said:

*“Usually, using amuja leaves, bangle, many types when exposed to lingkao holes. If the worms leaves lengnga-lengnga padang, usually, if you have fever, kau-kau leaves, colli aju java for fever”*

(EN, Parent of child, 34 Years old)

Unlike the children parents informants who use Moringa leaves in handling child diseases, as the following interview:

*“Moringa leaves, sour mango vinegar, it all avoids serru’ matanna and lowers the heat, right if the hospital is compressed as well as that it's just natural ingredients but the same to reduce heat as well, as well as first aid Moringa leaves, especially if in the midnight children suddenly sick”*

(HW, Parent of child 39 Years old)

Meanwhile, other informants also used plants as a mixture for children's bathing water in handling diseases, as follows:

*“There, as bathed using pale 'kaniki leaves, heated and then kneaded then bathed for pain barrier. If the worms are given lengnga leaves, the field is squeezed and then washed. All of these are concoctions for bathing mixes. If smallpox use leaves bitter melon, raw turmeric, onion, pecan sliced and then given betel leaf bailu. If the fever is cured, raw*

*turmeric is pounded, the leaves are bitter melon, onions, pecan are then mixed and then bathed in the child who has recovered from smallpox. It is also given welompogi to drink, then recited incantations if the child is sick”*

(HA, Traditional children healers, 68 Years old)

The answers from health workers at the Manisa Health Center regarding traditional health services are the implementation of counseling for traditional treatment by the manager of traditional medicine (BATRA), as follows:

*“Here, there is counseling for medicinal plants, there is indeed counseling for the medicine. If there is a disease from the doctor, if the body and knees are hurt, counseling is given, such as ginger ingredients for herbs, ginger herbs. The traditional healers are visited at his house every month and recorded by the types of herbs used like manuals, energy therapy, mind-training. If the manual is only his hand like the incantation is always visited every month, it is always included in the report every three quarters there is also a book for taking medicinal plants. There is indeed the formation of the ASMAN group if here like in Benteng, Panreng, Manisa there is indeed its formation as soon as Asuhan Mandiri for medicinal plants that have many medicinal plants, but I form the ASMAN group. Plant the medicine for all types of diseases”*

(NM, Health worker, 33 Years old)



Based on the results of in-depth interviews with informants, it was found that the knowledge to concoct plants into medicine for the management of child diseases was obtained by the informants who were downgraded from the literature, as quoted by the following interview:

*“This bangle functions to enforce the whole body, the way the blood can run smoothly if it is mixed all of it. The lempuyang and bangle can also be given by children to go away, not be disturbed by parakang. Cinnamon is just the mixture, the main medicine is bangle with lempuyang. Those's two kinds. It was true that there was no change in medicine from parents, nothing added”*

(HR, Traditional children healers, 76 Years old)

## DISCUSSION

Based this research it is known that the Tolotang community knows the availability of health care facilities that are around their homes such as health centers, village health post, auxiliary community health center and health workers who provide health services at home. In addition, health service facilities are available and in terms of accessibility can be reached at a distance not so far from the residence of Tolotang community in the villages of Manisa and Amparita. As well as traditional plants that available in the surrounding environment used by the Tolotang community using skills that are known to be hereditary before bringing children to health care facilities.

In line with the research conducted by Marnah et al (2016), the respondents stated that they knew, types of medical health services such as hospitals, health centers, medical doctors, auxiliary community health center, nurses and midwives practice. In addition, respondents also knew and explained the types of health services in the area, dukun, masseurs, smart people, traditional/religious leaders who could provide water for prayer.

The distance between residence and place of health service facilities is also a supporting factor in the utilization of health services. Respondents stated that they routinely attended the elderly posyandu activities, as a form of utilization of health services visited only on foot. In line with research by Hidana et al (2018) stating that the availability of health workers, easy accessibility and having health insurance have a proportion of utilizing more health services.

A different thing was found in Su'udi & Hendarwan (2017) regarding "Utilization Of Health Services Of Targetting Tabalong Health Security Program In Tabalong District, South Kalimantan" that utilization of free health services at the community health center is not optimal, several factors including the travel time to health service facilities and transportation costs. Expenditures for transportation to health care facilities are important considerations for families to utilize health services so that high transportation costs have the opportunity to prevent someone from coming to health services at the health center.

Handling child diseases in the Tolotang community by using herbs made



into ingredients by mixing combinations of several other plants, that are commonly used are turmeric, bangle, lempuyang, onion, garlic, betel leaf and curcuma. The use of plants in handling diseases was also discussed in Dewi et al (2017) found 53 species from 29 families that were used as traditional medicine. Part of the medicinal plants used are roots, tubers, rhizomes, twigs, stems, leaves, flowers, seeds and fruit by varying processing methods such as: dried, pounded, kneaded, grated, brewed, boiled, roasted, fried, chewed, dripped, rubbed, squeezed, smeared, eaten and drunk directly. Other research by Ihsan et al (2016) discussed most of the plant parts used are leaves. Lansau dosage form is dekok by boiling it in the stove. Taking plants is done in the morning before 9 in the morning. 44 kinds of plants can be substituted with other plants of similar efficacy according to physician/Muna community knowledge.

In addition, in the use of medicinal herbs in this study generally inscribed on the body of a sick child, this was also discussed in the Mabel et al (2016) Results of the study of identification and use of medicinal plants in 9 villages in Asologaima, Kurulu and Wamena Subdistricts, found 16 species medicinal plants from 12 families that are utilized by the local community with different properties and uses, boiled, mashed, made vegetables, heated in fire, sprinkled and slapped on a sick body part. Parts of plants that are widely used by the community are leaves and based on their habitus, the most are bush plants.

The use of plants as traditional medicine is discussed in research conducted by Chukwuma et al (2015)

"Traditional medicine and the future of Plants in Nigeria medicinal" showed the fact that medicinal plants continue to play an important role in Nigeria's health care sector, also in traditional medical practitioners who have hereditary skills in concocting traditional medicine. Then a study Kunwar et al (2013) that the medicinal ingredients are the main ingredients of traditional therapy, and are often the first choice in treatment because they have been consumed, and managed through customs and local knowledge. In line with a study by Adams et al (2015) that indigenous Australians seem to use traditional medicine in connection with their cancer care, and this is a significant health care problem. This was also discussed in Kurniarum & Novitasari (2016) on "The Use Of Traditional Medicine Plants To Increase Food Effects In The Today" that the most widely used type of traditional medicinal plant is black ginger.

Based on the results of interviews with the management of BATRA (Traditional Medicine), it was explained that in the community in the Manisa Community Health Center work area an independent care group had been established to manage the Family Medicinal Plants (TOGA) in the home yard, in line with the research (Sari et al., 2015). Shows that the TOGA program has been included in the Family Welfare Development Program (PKK) and similar programs have been developed in several villages. In Banjarwaru village there is Saung Wira with an area of about one hectare consisting of a collection of trees such as various types of bamboo and other plants including medicinal plants.



People who plant medicinal plants generally use the medicinal plants for initial treatment before going to health workers where "myths" or traditions are still the basis of planting and utilization of sticky plants in each area for some people.

In addition to traditional plants, the handling of pediatric diseases is also read potions as in Lesmana et al (2018) The local wisdom of the Tidung community in the field of health has been passed down from ancestors to natural ingredients on the island of Borneo, local wisdom Tidung community in the field of health, especially traditional medicine in adult patients, uses 3 approaches to overcome the health problems they experience, that is using the action/ herbal/ herb approach, supernatural prayer / read-read approach and the combined approach of the two methods.

From these research, it is known that parents of children in the Tolotang community carry out self-treatment first as an initial treatment for children diseases. In this health care system there are elements of knowledge from traditional and modern medical systems. This can be seen if there are children who suffer from diseases, so the mother or other family members will do self-treatment first. The act of giving this medicine is the first action most often done in an effort to treat disease and is a stage of healing or health seeking behavior known as "health seeking behavior" (Khasanah, 2011). The use of plants is carried out by parents of toddlers as the first care for children who are sick based on their families. Based on research by Prasanti (2018) that the first traditional

medicine is used as a first aid in family therapeutic communication.

Furthermore, it is known that the knowledge to concoct plants into medicine for the treatment of childhood diseases was obtained by informants who descended from the ancestors. There is something that is obtained by learning it directly, there are those who get magical through dreams. Another study discussed the selection of medicinal plants and medication in the Merdeka Sub-District of East Kupang District that has criteria for taking medicinal plants. This is influenced by knowledge, plant availability and beliefs inherited from generation to generation. Knowledge gained by Health Restructuring is inheritance obtained from parents, and can only be inherited for family members only (Sambara et al., 2016). The method of treatment is based on the knowledge that has been obtained from her predecessor. Medicinal materials and care equipment obtained from the surrounding environment, as well as maintenance techniques that are easily carried out using prayers or received (Intani, 2015).

In line with the research conducted by Kusumah (2017) that knowledge of plants that can be used as medicine was obtained by the Bugis-Makassar community through several ways such as reading lontara' pabbura, an ancient text containing knowledge about plants and how to use them to cure diseases, inheritance from people parents or ancestors, and try to concoct their own medicine because generally the plants used can be found around their environment



## CONCLUSION AND SUGGESTION

In general, the availability of resources and facilities in handling child diseases in Sidrap Regency, especially in Manisa and Amparita i.e. community health centers, sub-district health centers and post-village health centers, can be accessed by the community even though on foot. Meanwhile, the use of plants available in the surrounding environment such as betel leaves, turmeric and bangle is widely used by the community as a traditional initial treatment if the child is sick before bringing it to health services.

This is because the informants have gained the knowledge of concocting plants into traditional medicines from

generation to generation and are still maintained today. Traditional treatment of disease is found to be still high in the Tolotang community, whether it is visits to traditional healers or the use of plants processed in handling child diseases. Thus, it is expected that the Sidrap District Health Office can maximize the implementation of traditional health services in the health center so that the traditional health services obtained by the community are more directed with minimal risk and family medicinal plants are expected to be more utilized by families independently with guidance from local health workers.



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# The Effect of Premenstrual Syndrome On Female Workers' Productivity In PT. Bogatama Marinusa, Makassar City

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**Keywords:** Pre Menstrual Syndrome, Psychological Complaints, SPM Type, Use of Leave, Productivity

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## ABSTRAK

This study is complemented by the approval of the Prem Menstrual Syndrome, which is attended by every woman before her arrival, in order to increase women's productivity. This study aims to analyze the influence of premenstruation on female labor productivity at PT. Bogatama Marinusa in Makassar City. This research was conducted at PT. Bogatama Marinusa in Makassar City with the method used was cross sectional involving 90 samples of female workers who met the research criteria. Data collection is done by interviewing using a questionnaire. Data analysis using Chi-Square test and multiple logistic tests. The result showed that there were interaction between premenstrual syndrome, psychic complaints, premenstrual syndrome types and use of leave on female labor productivity ( $p < 0,05$ ). There is no consideration of the physical strenghts of women's work productivity ( $p > 0,05$ ). Policy owner are expected to be able to improve health facilities at the factory as well as routinely conduct health checks.

## INTRODUCTION

Menstruation is bleeding due to the process of releasing the uterine wall (endometrium). Syndrome Pre Menstruation is one of the most common disorders in women. As many as 30-50% of women experience symptoms of PMS, and about 5% experience severe symptoms that have a major impact on their physical health and social function (Ramadani, 2012).

Syndrome Pre Menstruation (SPM) is a physical disorder that is common in

mid-young women, characterized by consistent physical and emotional symptoms. Symptoms can be estimated and usually occur regularly at 7-14 days before menstruation and will disappear during menstruation (Siyamti et al., 2011).

The difference in the incidence of premenstrual syndrome among women is usually caused by several factors including stress, increasing age, poor diet and nutritional status. Personality characteristics factors may be related to





SPM that triggers premenstrual symptoms (Gaion et al., 2011)

The most common physical symptoms experienced by women include abdominal cramps or pain (51%), joint, muscle or back pain (49%), breast pain (46%), and flatulence (43%). About one in three SPM sufferers said their lives are affected by these symptoms substantially (Wahyuni et al., 2015). Asia Pacific found that around 63% of SPM sufferers had never seen a doctor while cases in the Asia Pacific region varied, with the highest prevalence in Australia (43%) and the lowest in Pakistan (13%).

Gracia et al (2011) found that there was a relationship between premenstrual syndrome and sleep disorders so that you can be more careful in diagnosing and doing therapy for patients. Much of the research that describes risk factors Syndrome Pre Menstruation. One of them is Namsa et al (2015) found that there was a significant relationship between nutritional status and premenstrual syndrome in adolescent girls in Brother Don Bosco High School Manado. Puspitasari et al (2014) found that respondents who knew 0.473 times better at managing premenstrual syndrome than respondents who had less knowledge so that this information could be used in an effort to overcome SPM complaints. This study aims to influence the effect of premenstrual syndrome on female labor productivity at PT. Bogatama Marinusa in Makassar City.

## **METHOD**

### ***Research Design and Location***

This research was conducted at PT. Bogatama Marinusa Makassar City for

two months from March to April 2019. This study was an observational study using cross-sectional study.

### ***Population and Sample***

The population in this study were all female workers who worked at PT. Bogatama Marinusa Makassar in 2019 were 115 female workers. The sample in the study was female workers who worked at PT. Bogatama Marinusa Makassar in 2019 as many as 90 female workers.

### ***Data Collection***

Primary data is obtained through direct interviews with female workers of PT. Bomar Makassar using a questionnaire. Data secondary collected by the Company Profile PT. Bogatama Marinusa Makassar City regarding the number of female workers and company profiles at PT. Bogatama Marinusa Makassar Makassar City.

### ***Data Analysis***

Data were analyzed using the SPSS program. The data analysis technique used is univariate analysis that serves to provide a description of female labor characteristics, bivariate analysis to find the relationship between the independent variables and the dependent variable with the chi-square test, and multivariate analysis to examine the effect of independent variables (physical complaints, psychological complaints, SPM type, and use of leave) on the dependent variable (female labor productivity) together. The data presentation is done in the form of a frequency distribution table with interpretation.



## RESULTS

**Table 1. Characteristics of Respondents**

Characteristics	n	%
<b>Age (years)</b>		
18-25	22	24.44
26-35	41	45.56
36-40	14	15.56
>40	13	14.44
<b>Education</b>		
Elementary school	10	11.11
Junior high school	27	30.00
High school	45	50.00
Academic	2	2.22
Bachelor	6	6.67
<b>What order do you come in your family</b>		
Single	2	2.22
First	27	30.00
Youngest	12	13.33
Etc	49	54.44
<b>Productivity</b>		
High	71	78.89
Low	19	21.11
<b>Pre Menstrual Syndrome (SPM)</b>		
Felt	29	32.22
Not	61	67.78
<b>Physical complaints</b>		
There is	31	34.44
There is no	59	65.56
<b>Psychic Complaints</b>		
There is	30	33.33
There is no	60	66.67
<b>SPM type</b>		
Single	40	44.44
Combination	50	55.56
<b>Leave Use</b>		
<3 days	52	57.78
> 3 days	38	42.22

Table 1 showed that the majority of respondents aged 26-35 years were as many as 41 respondents (45.56%), for education level 45 respondents (50%) educated in high school level, and 49 respondents status as the fourth child (54.44%). Table 1 also showed that most respondents have high productivity as much as 71 respondents (78.89%), for SPM most respondents who do not feel the SPM 61 (67.78%), the physical complaints that most respondents do not feel as much as 59 (65.56%), 60 respondents (66.67%) felt psychic complaints, for the SPM type most respondents were combination types as many as 50 respondents (55.56%) and for the most leave were those who took leave <3 days 52 respondents (57.78%).

Table 2 shows that more people did not feel physical complaints (83.05%), compared to those who felt physical complaints (70.97%). The results of the statistical test showed a value of  $p > 0.50$  that means that it is not significant so it is concluded that there is no relationship between physical complaints and productivity.

Table 3 shows that found more in those who did not feel psychic complaints (86.67%), compared to those who felt psychological complaints (63.33%). The results of the statistical test showed a value of  $p < 0.05$ , that means significant, so it was concluded that there was a relationship between psychological complaints and productivity. Table 3 also showed that it is found more in the combination SPM type (88.00%), compared to the single



**Table 2. Relationship between Physical Complaints and Productivity of Respondents**

Physical Complaints	Productivity				Total		<i>p</i>
	Low		High		N	%	
	n	%	n	%			
Felt	9	29.03	22	70.97	31	100	0.288
Not felt	10	16.95	49	83.05	59	100	

**Table 3. Relationship between Psychic Complaints and Type of SPM with Productivity of Respondents**

Variable	Productivity				Total		<i>p</i>
	Low		High		N	%	
	n	%	n	%			
<b>Psychic Complaints</b>							
Felt	11	36.67	19	63.33	30	100	0.022
Not felt	8	13.33	52	86.67	60	100	
<b>SPM type</b>							
Single	13	32.50	27	67.50	40	100	0.035
Combination	6	12.00	44	88.00	50	100	

**Table 4. Relationship between Utilization of Leave and Productivity of Respondents**

Leave Use	Productivity				Total		<i>p</i>
	Low		High		N	%	
	n	%	n	%			
> 3 days	13	34.21	25	65.79	38	100.0	0.019
<3 days	6	11.54	46	88.46	52	100.0	

**Table 5. Multivariate Analysis with Backward Wald Method of Logistic Regression Analysis**

Variable	B	p-value	OR (95% CI)
Physical complaints	- 1,530	0.027	0.216 (0.056 - 0.837)
Psychic Complaints	- 1,904	0.005	0.149 (0.039 - 0.566)
SPM type	1,862	0.006	6,437 (1,691 - 24,503)
Leave Use	1,625	0.011	5,080 (1,462 - 17,646)



SPM type (67.50%). The results of the statistical test show a value of  $p < 0.05$ , that means significant so it can be concluded that there is a relationship between the type of SPM and productivity.

Table 4 showed that more than 3 days of leave (88.46%) was found, compared to > 3 days leave (65.79%). The results of the statistical test showed a value of  $p < 0.05$ , that means significant so it was concluded that there was a relationship between the use of leave with productivity. Table 5 shows that variables that affect productivity are physical complaints, psychological

## DISCUSSION

This study showed the effect of premenstrual syndrome (physical complaints, psychological complaints, type of SPM, and use of leave) on the productivity of female workers at PT. Bogatama Marinusa in Makassar City. The results showed that there were influences on the incidence of premenstrual syndrome (SPM), psychological complaints, the type of premenstrual syndrome (SPM) and the use of leave on the productivity of female labor. While physical complaints do not affect the productivity of female workers.

Saryono et al (2009) explain the causes of premenstrual syndrome is associated with several factors such as the hormonal imbalance between estrogen and progesterone. Among changes during SPM are physical changes, mood swings, and mental changes.

The results of this study are in line with the research conducted by Fatul (2017) at Airlangga University, that

complaints, type of STD and use of leave. The OR value of psychological complaints is 0.149 with Upper- Lower values = 0.039-0.566, that means that respondents who experience psychological complaints have a possibility of 0.149 times to produce low productivity compared to respondents who do not experience psychological complaints. Table 5 also showed the Nagelkerke R<sup>2</sup> value of 0.375 that can be interpreted that the proportion of employee productivity can be explained by psychological complaints, physical complaints, utilization of leave and SPM type.

shows that premenstrual syndrome does not have a relationship with the level of physical activity, with  $p = 0.678$ . As well as journals published by (Ramadani, 2012) that show that there are only 5% of physical complaints related to SPM.

There are two symptoms when premenstrual syndrome arrives, namely physical symptoms including cramps, abdominal pain, breast pain, flatulence, increased weight, increased fatigue, swelling of the hands and feet, joint pain, pain head, and insomnia (insomnia). Then the emotional symptoms, including irritability, irritability, increased appetite, unstable mood, anxiety, feeling sad and depressed, feeling depressed, feeling useless and guilty, sensitive, hopeless, feeling conflicted, desiring to decline, difficulty concentrating, and excessive queezing or loss of control.

This research is also in line with Ulfiyah et al (2018) in Universitas Brawijaya who found that work leave implemented by the company is very



effective in reducing the symptoms of employee work stress because work leave can make employees improve efficiency and effectiveness. Research by Aromega et al (2019) at Sam Ratulangi University in Manado also found that compensation in this case leave took effect on employee performance.

## **CONCLUSION AND SUGGESTION**

Based on the results of the research conducted, it shows that there are influences on the incidence of psychological complaints, the type of SPM, and the use of leave on the productivity of female workers. While physical complaints do not affect the productivity of female workers at PT. Bomar Makassar. The results of multivariate analysis showed that all variables affected the productivity of female labor. It is recommended for company policyholders to improve health care facilities at the factory and routinely provide medical check-up services to female workers



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# Analysis of Factors That Influence The Performance of Nurses In Mother and Child General Hospital And Mother and Child Private Hospital, Makassar City

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## ABSTRAK

Performance is interpreted as one of the benchmarks of organizational success, especially in public health services, so that through the focus on improving the quality of human resources it is expected that the quality of services will be increase. This study aims to understand the factors that affect the performance of nurses in Mother and Child General Hospital and Mother and Child Private Hospital, Makassar City. The study was quantitative study using cross-sectional design, samples were selected by saturated sampling because the whole population was relatively small at 90 samples. The results showed that individual characteristics variables influence the performance of nurses in the Government Hospital and Mother and Child Private Hospital inpatient care room ( $p = 0.002$ ;  $p = 0.025$ ). Likewise, the team variables influence the performance of nurses in the Government Hospital and Private Hospital inpatient care room ( $p = 0.010$ ;  $p = 0.011$ ). System variables influence the performance of nurses in the Government Hospital and Mother and Child Private Hospital inpatient care room ( $p = 0.043$ ;  $p = 0.065$ ). Likewise, situational variables influence the performance of nurses in the Government Hospital and Mother and Child Private Hospital inpatient care room ( $p = 0.010$ ;  $p = 0.060$ ). The dominant factor influencing the performance of nurses is the individual characteristic variable in Mother and Child General Hospital ( $p = 0.0131$ ;  $\text{Exp B} = 6,286$ ) and the team factor in the Mother and Child Private Hospital with ( $p = 0.0205$ ;  $\text{Exp B} = 4,345$ ). Therefore, it is expected that the hospital will periodically include nurses in activities to improve soft skills or hard skills so that the improvement of nurses' competencies and knowledge can continue to be improved.

## INTRODUCTION

Human resources for a company are one of the most important parts were actively able to encourage productivity, so that they can meet the goals of a company. However, it needs the best

management to be able to manage employees in a company, so that through a synergistic relationship between the company and employees the company's goals can be achieved. According to Hastuti et al (2012), important attention is



needed to the employee's performance patterns so that synergic relationships established.

Hospital as one of the referral service facilities that provide medical services to the community directly is also obliged to carry out the best management in improving quality such as repairing infrastructure and human resources, especially nurses who have the largest proportion around 75%. Kamal et al (2018) state, to achieve a hospital function actually, not enough just to provide medical services but the Hospital should be aware condition of the workforce absolutely, in this case is the performance of nurses.

The quality of health services in Indonesia today, especially hospitals are getting attention from the community, so that management constraints and their implementation need to be addressed or minimized immediately (Puspitasari et al., 2015). Performance is an issue of the world, so nurses and midwives were expected to be able to show their professional contribution in the real way to improve quality. According to Suharyoko (2016), if organizational performance is not optimal, then organizational goals will not be achieved. Silaban et al (2017) stated, one method in assessing nurse performance is reviewing standards of nursing care that describe the desired quality related to nursing services to clients.

American Nurse Association reported that preventive services were initially carried out by doctors, 60% -80% could actually be given to nurses with professional abilities and produced the same quality of service (Putri et al.,

2015). In 2014, the World Health Organization collaborated with the Indonesian Ministry of Health, on 1,000 nurses and midwives in 4 provinces found that no management system supported the realization of good clinical performance (Depkes RI., 2014).

A survey conducted by the Health Information Center on the quality of health services, information was obtained that out of 87,000 people interviewed in three regions, randomly selected Jakarta, Makassar and Bali Island, at least 67% of patients were not satisfied with health services, while only 23% who expressed satisfaction, the health services felt the lowest quality according to the survey were midwives and nurses (Putri et al., 2015).

Based on the monitoring of central Jakarta Health Information System officers, around 150,000 health workers there were 87,459 people who complained about the low incentives received from the Health Office where they working, even though every day they had been charged various jobs, even health workers sometimes completed work that was not their responsibility (Mudayana, 2010).

Various studies prove important indicators in assessing nurse performance such as, Hartati's (2005) study found that there was a significant relationship between employee performance and competence and work motivation. Widyatmini & Hakim (2011) said that leadership, compensation, and competency factors have a positive and significant effect on employee performance. Regarding employee performance Mandagi et al (2015) also proved that there was a correlation





between motivation, supervision, and appreciation with the performance of nurses in implementing nursing care. Then Prasetya (2017) shows that the knowledge, leadership, work environment, and compensation factors greatly affect nurse performance.

Along with the development and popping up of various hospitals in the city of Makassar, the competition between hospitals is getting tougher. In addition, the implementation of the National Social Security System requires Mother and Child General Hospital - Siti Fatimah, Mother and Child Private Hospital - Pertiwi, and Mother and Child Private Hospital - Sitti Khadijah to provide quality services at rates determined by the organizers of Social Security Organizations, so that the sustainability of Mother and Child General Hospital - Siti Fatimah services can be maintained both in terms of service quality and management human resources. Therefore, the indicator used by researchers in this study is the achievement of the application of standard nursing care.

The fact of this case shows that the performance of nurses Mother and Child General Hospital, and Mother and Child Private Hospital - Sitti Khadijah were related to the implementation of the optimal nursing care standard, Mother and Child General Hospital - Siti Fatimah (74.2%), Mother and Child Private Hospital - Pertiwi (73.6%), and Mother and Child Private Hospital - Sitti Khadijah (71.3%) with the ideal standard of PPNI in 2010 that is 81-100%. Based on the description of the background, the researcher intends to review what factors influence the performance of nurses

conducted by Mother and Child General Hospital and Mother and Child Private Hospital - Sitti Khadijah Makassar City.

## **METHOD**

### ***Research Design and Location***

The study was conducted at Mother and Child General Hospital (Siti Fatimah and Pertiwi) and Mother and Child Private Hospital (Siti Khadijah) Makassar City, that began with the distribution questionnaires to all nurses who met the criteria of respondents. This research was conducted in January 2019 using a cross-sectional design with quantitative studies.

### ***Population and Sample***

The population was a generalization area consisting of objects/ subjects that have certain quantities & characteristics determined by researchers to be studied and then drawn conclusions or all nurses working in Mother and Child General Hospital inpatient government and Private Hospital, as details : 20 nurses in Mother and Child General Hospital - Siti Fatimah, 35 nurses at Pertiwi, and 36 Mother and Child Private Hospital Nurses. However, based on study criteria the number of samples was 90 respondents.

### ***Data Collection***

Data collectors in this study are divided into 2 primary and secondary data collection, primary data obtained directly from respondents selected as samples with a list of questions that have been prepared based on 3 parts of the questionnaire. While secondary data as a complement to study data obtained at Mother and Child General Hospital (Siti Fatimah and Pertiwi) and Mother and



Child Private Hospital (Siti Khadijah)  
Makassar City.

#### **Data Analysis**

The data has been collected were processed using SPSS software. The analyzed by univariate, bivariate, and multivariate.

## **RESULTS**

The results of study based on Table 1 showed that, the majority of respondents in Mother and Child General Hospital and Mother and Child Private Hospital were in the age range of 31-35 years 37% and 41.7% respectively, with

**Table 1. Distribution of Respondents according to Characteristics**

Characteristic	Mother and Child General Hospital (Siti Fatimah & Pertiwi)		Mother and Child Private Hospital (Siti Khadijah)	
	n	%	n	%
<b>Age</b>				
20-25 year	1	1.9	2	5.6
26-30 year	18	33.3	18	50.0
31-35 year	20	37	15	41.7
36-40 year	14	25.9	1	2.8
41-45 year	1	1.9		
<b>Gender</b>				
Man	10	18.5	8	22.2
Woman	44	81.5	28	77.8
<b>Level of Education</b>				
Diploma	28	51.9	16	44.4
Bachelor Degree	21	38.9	19	52.8
Etc	5	9.3	1	2.8
<b>Years of Service</b>				
1-5	24	44.4	28	77.8
6-10	22	40.7	8	22.2
11-15	7	13.0		
16-20	1	1.9		
<b>Employment status</b>				
Civil Servant	17	31.5	7	19.4
Non – Civil Servant	37	68.5	29	80.6
<b>Training Ever Followed</b>				
Ever	36	66.7	28	77.8
Never	18	33.3	8	22.2

the majority of respondents were female, where the respondents in Mother & Child

General Hospital were 18.5% and 81.5% women, while in the Mother and Child



Private Hospital 22.2% male and 77.8% female. Regarding the level of education, the Mother and Child General Hospital respondents were mostly Diploma III Nursing graduates of 51.9%. Whereas in Mother and Child Private Hospital the highest private graduates were Nursing (Bachelor Degree) 52.8%. Regarding the working period of respondents both in Mother and Child General Hospital and Private Hospital generally worked in 1-5 years period, 44.4% & 77.8%

respectively, with the majority employment status being Non-civil servants 68.5% at Mother and Child General Hospital and Non Civil servants amounted to 80.6% in Mother and Child Private Hospital. As for the frequency of experience with training, respondents in Mother and Child General Hospital who had attended training amounted to 66.7%, while those in Mother and Child Private Hospital 77.8%.

**Table 2. Cross Tabulation Analysis between Independent Variables and Nurse Performance in Mother and Child General Hospital (Siti Fatimah & Pertiwi) and Mother and Child Private Hospital (Siti Khadijah)**

Variable	Performance of Nurse									
	Mother and Child General Hospital (Siti Fatimah & Pertiwi)					Mother and Child Private Hospital (Siti Khadijah)				
	Good	%	Excellent	%	Uji Statistik	Good	%	Excellent	%	Uji Statistik
<b>Characteristics of Individuals</b>										
Good	13	61.9	8	38.1	$X^2=10.758$ (p = 0.002)	17	89.5	2	10.5	$X^2=5.969$ (p =0.025)
Excellent	6	18.2	27	81.8		9	52.9	8	47.1	
<b>Team</b>										
Good	14	53.8	12	46.2	$X^2= 7.657$ (p = 0.010)	18	90	2	10	$X^2= 7.089$ (p =0.011)
Excellent	5	17.9	23	82.1		8	50	8	50	
<b>System</b>										
Good	12	52.2	11	47.8	$X^2= 5.070$ (p = 0.043)	15	88.2	2	11.8	$X^2= 4.117$ (p =0.065)
Excellent	7	22.6	24	77.4		11	57.9	8	42.1	
<b>Situational</b>										
Good	14	53.8	12	46.2	$X^2= 7.657$ (p = 0.010)	16	88.9	2	11.1	$X^2= 4.985$ (p =0.060)
Excellent	5	17.9	23	82.1		10	55.6	8	44.4	

Based on the analysis between independent variables and nurse performance, table.2 shows that respondents in Mother and Child General Hospital with good individual characteristic variables have good nurse performance 61.9% greater than the excellent performance of 38.1%. Respondents with excellent individual

characteristic variables had good nurse performance 18.2%, smaller than the excellent performance of 81.8%. Whereas Respondents in Mother and Child Private Hospital with good individual characteristic variables have good nurse performance of 89.5% greater than the excellent performance 10.5%. Very good individual



characteristic variables have good nurse performance of 52.9%, greater than the excellent performance 47.1%. The results of the statistical tests both Mother and Child General Hospital and in the Mother and Child Private Hospital obtained significant results between individual characteristic variables on nurse performance respectively,  $X^2 = 10.758$  with  $p\text{-value} = 0.002$  and chi-square  $X^2 = 5.969$  with  $p\text{-value} = 0.02$ .

There was significant relationship between team variables on the performance of nurses in Mother and Child General Hospital and in Hospital-Private, where Mother and Child General Hospital - Siti Fatimah obtained chi-square  $X^2 = 7.657$  with  $p\text{-value} = 0.010$  and in Mother and Child Private Hospital chi-square  $X^2 = 7.089$  with  $p\text{-value} = 0.011$ , with the description of respondents in Mother and Child General Hospital with good team variables has good nurse performance of 53.8% greater than the excellent performance of 46.2%. Respondents with excellent team variables have good nurse performance of 17.9%, smaller than the excellent performance of 82.1%. Respondents in Mother and Child Private Hospital with good team variables have good nurse performance of 90% greater than the excellent performance of 10%. In respondents with very good team variables having a good nurse performance of 50%, the same as very good performance that is 50%. (Table.2)

Mother and Child General Hospital with good system variables has good nurse performance of 52.2%, greater than the excellent performance of 47.8%. Respondents with excellent system

variables had good nurse performance of 22.6%, smaller than the excellent performance of 77.4%. While Respondents in the Mother and Child Private Hospital good system variables have good nurse performance of 88.2% greater than the excellent performance of 11.8%. The respondents with excellent system variables have good nurse performance of 57.9%, greater than the excellent performance of 42.1%. Based on the statistical test obtained a significant relationship, in Mother and Child General Hospital - Siti Fatimah obtained chi-square  $X^2 = 5.070$  with  $p\text{-value} = 0.043$ , and in the Mother and Child Private Hospital chi-square  $X^2 = 4.117$  with  $p\text{-value} = 0.045$ . (Table.2)

The result of cross tabulation between situational variables on nurse performance in Mother and Child General Hospital and Mother and Child Private Hospital also obtained a significant relationship namely Mother and Child General Hospital with chi-square  $X^2 = 7.657$  and  $p\text{-value} = 0.010$  and Mother and Child Private Hospital chi-square  $X^2 = 4.985$  with  $p\text{-value} = 0.060$ . Where respondents in Mother and Child General Hospital with good situational variables have good nurse performance of 53.8% greater than the excellent performance of 46.2%. In respondents with excellent situational variables having good nurse performance of 17.9%, smaller than the excellent performance of 82.1%. Whereas Respondents in Mother and Child Private Hospital with good situational variables have good nurse performance of 88.9% greater than the excellent performance of 11.1%. In respondents with very good individual



characteristic variables having good nurse performance of 55.6%, greater than the excellent performance of 44.4%. (Table.2)

The results of multivariate analysis in Table 3 can be seen that the most dominant independent variable that influences the performance of nurses is the individual characteristic variable in Mother and Child General Hospital with p-value 0.0131 with the value of Exp B = 6.286. This shows that individual characteristic variables influence 6,286

times greater on nurses' performance in carrying out nursing practice standards in Mother and Child General Hospital. Whereas the Mother and Child Private Hospital is a team factor with p-value 0,0205 and Exp B = 4,345, this indicates that the team variable has an influence 4,345 times greater on the performance of nurses in implementing the standards of nursing practice in the Mother and Child Private Hospital.

**Table 3. Regression Analysis in Mother and Child General Hospital (Siti Fatimah & Pertiwi) and Mother and Child Private Hospital (Siti Khadijah)**

Variabel	Mother and Child General Hospital (Siti Fatimah & Pertiwi)					Mother and Child Private Hospital (Siti Khadijah)				
	B	S.E.	Wald	Sig.	Exp (B)	B	S.E.	Wald	Sig.	Exp (B)
Characteristics of Individuals	<b>1.838</b>	<b>1.218</b>	<b>2.277</b>	<b>0.013</b>	<b>6.286</b>	19.845	40192.587	.000	1.000	415295 262.770
Team	.381	1.796	.045	.832	1.464	<b>1.469</b>	<b>1.158</b>	<b>1.610</b>	<b>0.020</b>	<b>4.345</b>
System	-.241	1.317	.034	.855	.786	-18.919	40193.5 10	.000	1.000	.000
Situational	.381	1.796	.045	.832	1.464	.000	56841.5 55	.000	1.000	1.000
Constant	-6.386	2.435	6.875	.009	.002	-9.469	3.783	6.264	.012	.000

**DISCUSSION**

Research showed that individual, team, system, and situational characteristics variables have significant relationship to nurses' performance in study area hospitals, but after multivariate analysis, the most dominant independent variable influencing nurse performance was individual characteristic variables in Mother and Child General Hospital while dominant team variables affect the performance of nurses at Mother and Child Private Hospital.

The dominance of individual characteristics of nurses in Mother and Child General Hospital was associated with various supporting factors, beside to the technical capabilities possessed, commitment nurses on the feeling proud to be part of the hospital, as well as recognition given makes nurse's commitment more dominant. On the psychological basis, humans need appreciation for every work they do in an



effort to reinforce the existence of its existence. In addition, the

recognition of nurses was manifestation of efforts to involve nurses in organizational operations, to meet recognition needs, the hospital does not have to always give awards in the form of material, but can be done by giving praise to nurses as a motivation.

According to Shahzadi et al (2014) employee motivation is considered as a power that is able to encourage employees to achieve organizational goals. Al-Hawary & Banat (2017) also found that statistically there was a significant influence between motivation (material and non-material) on nurse performance, especially in private hospitals in Jordan, Aduo-Adjei (2016) emphasized that motivation was the key to nurse's performance. A recent study by Morika (2019) found that there was a relationship between motivation and performance of nurses in implementing patient safety services.

Furthermore, the existence of feedback from the Mother and Child General Hospital on nurses' achievements made nurses' performance of higher than that of Mother and Child Private Hospital. The form of hospital feedback on nurses' achievements was the enactment of functional positions for nurses who were civil servants. The nurse's functional position was determined based on the position of the nurse, the last education and training that has been followed and the implementation of nursing tasks that have been carried out. Similar results were found by Kumajas et al (2014) in Datoe Binangkang General Hospital,

Bolaang Mongondow District, showed that individual characteristics had a significant relationship with nurse performance.

In contrast to Mother and Child Private Hospital, the most dominant variable influencing nurses' work processes in carrying out nursing practice standards was the team variable. This was connected because even though the technical capabilities of nurses strongly support the performance of nurses, but the communication and cooperation of nurses was an important supporting factor in completing tasks. Interaction in organizations requires coordination in various ways through communication so that individuals or groups within the organization become integrated parts to achieve one goal.

The weak communication of organizations will risk giving less performance than strong communication of organizations, the results of this study illustrate the importance of communication in organizations as a key to strengthen members, so that they were mutually dependent and provide the best service together. The nurses also provide optimal feedback and assess information conveyed by colleagues was able to motivate staff to participate in nursing services optimally.

According to Babiker et al (2014) with teamwork, safety and service to patients more effective, Leonard et al (2004) state that through effective communication and teamwork it will be very important to deliver quality and safe patient care. In addition, Zawawi et al (2017) stated that when team members believe that their tasks were important and



valuable, they will get more energy so they were motivated to exert more power and effort to achieve better team performance.

## **CONCLUSION AND SUGGESTION**

Reviewing the results of studies and direct observations during the study, researchers concluded Mother and Child General Hospital, need to improve quality in terms of system, team and situational whereas in Mother and Child Private Hospital need to improve quality in terms of individual, system and situational characteristics. Therefore, in order for nurses to improve and be more qualified, an evaluation of various operational standards was needed, improving service standards if it has been fulfilled as an effort to improve quality, and periodically involving nurses in training, seminars or workshops so as to increase competency and Nurse knowledge can continue to be improved.



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# Earthquake Disaster Preparedness Education in Elementary School Students in Majene Regency

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## ABSTRAK

Children are one of the vulnerable populations affected by natural disasters, due to their inability to act independently in the event of a disaster. So it takes effort to improve the preparedness of children to face natural disasters. This study aims to analyze the effect of education using simulation methods and picture book on knowledge about disaster preparedness. This research was conducted in SDN 26 Pakkola as an intervention group and SDN 28 Tamo as a control group. The method used is Quasi Experiment with the design of Non-Randomized Pre-test Post-Test Control Group Design. The total sample are 70 samples. Sampling was done in Simple Random Sampling. Data analysis using Wilcoxon Test and Mann-Whitney. The results showed that the average knowledge score experienced an increase, the intervention group (40%) while the control group (27). This study also showed differences in the average score of knowledge of respondents between the intervention and the control group. For pre-test ( $p = 0.962$ ) which means there was no significant difference while in post-test 1 and 2 there are significant differences ( $p = 0.001$  and  $p = 0,000$ ). There was the effect of earthquake disaster simulation education and picture book on knowledge ( $p = 0,000$ ). This study concluded that there was an effect of simulation methods and picture books on increasing student knowledge about earthquake preparedness.

## INTRODUCTION

Natural disasters are defined as an incident that causes damage, ecological disorders, loss of human life, health damage, healthcare services, disrupting daily life, causing social, economic and political harm (Rij, 2016). One of the natural disasters that swallowed many victims was an earthquake.

At the world level in the last 20 years the earthquake occurred in several

places like an earthquake in Iran in 1990, that killed about 50,000 people. Besides, the earthquake in Bam Iran also killed approximately 26,271 people in 2003, and the earthquake in Pakistan killed about 50,000 people in 2005 (Rij, 2016; Johnson et al., 2014).

In Indonesia also occurred several major earthquakes that occurred in the last decade of earthquakes in Bengkulu in



2000 (7.8 Skala Richter), Aceh in 2004 (9.2 SR), Sumatera-Andaman in 2004 (killing more than 200 thousand people), Nias in 2005 (8.7 SR), Yogyakarta in 2006 (7.6 SR), Pangandaran in 2006 (6.8 SR), Padang (7.6 SR) and Papua in 2009 (7.6 SR). The economic losses that occurred since 2004-2010 varied from US \$39 million to US \$4.7 billion and caused more than 200,000 casualties (BNPB, 2016; Rohadi, 2009).

Kementerian Kesehatan Republik Indonesia stipulated 170 disaster-prone districts, from the list one of the disaster-prone districts is Majene Regency, West Sulawesi (Kemenkes RI, 2016). According to the National Disaster Management Agency (BNPB) in 2013 Majene District also ranks 8 major national disaster risk.

Enarson et al (2007) stated that in many developing countries, children are mostly the population most vulnerable to natural disasters and in a catastrophic event most of the victims are children. Around 175 million children tend to be exposed to natural disasters every year.

The extent of the children's age is victimized by their inability to act independently in the event of a disaster because of their dependence in part or total in adults (Peek, 2008). One of the reasons is the school-age knowledge of the cause of the injury and choosing the wrong action during a disaster (Johnson et al., 2014).

Research conducted by Winarni et al (2018); Wu et al (2015) states that natural disasters can cause a double burden on children, other than can cause physical injury, they also have trauma. Therefore, it is necessary to designed media that

contains material about mitigation and can be used as a supplement in learning to broaden students ' knowledge of disaster mitigation and to have good readiness and independence to respond disaster.

One of the educational media that can be used for disaster mitigation education is picture book. Students at elementary school age tend to be more happy to read if the contents of the book are interesting pictures, even more pleased to read the Illustrated Storybook (Rahmawati, 2016). In addition, it can also involve students directly on what to do when disasters like disaster simulation exercises.

The research of Indriasari (2016) also showed that the granting of simulated earthquake disaster methods has a positive influence with weak categories of earthquake disaster preparedness in children. According to Olson et al (2010), education on disaster preparedness using simulation in the form of games can give better results than those who do not use the simulation.

But in fact, there are still many schools in disaster prone areas that do not develop media and innovative learning models about disaster preparedness. Based on the explanation, the researcher is interested to see the influence of simulation and education with picture books on the knowledge and attitudes of elementary school students in the preparedness of earthquake disaster in Majene regency.

## **METHOD**

### ***Research Design and Location***

This research was conducted at SDN 26 Pakkola and SDN 28 Tamo



Majene Regency. The type of research used is Quasi Experiment with Non-Randomized Pre-Test Post-Test Control Group Design. SDN 26 Pakkola As a group of interventions provided education with simulation methods and picture books while SDN 28 Tamo as a control group given picture book education only.

### ***Population and Sample***

The population in this study was all active students as students of grade IV, V and VI at SDN 26 Pakkola as many as 114 students and SDN 28 Tamo as many as 109 students. So the total population of the samples was 223 students, each school selected as many as 39 students samples.

### ***Data Collection***

Primary data is obtained from selected students as samples with a pre-compiled list of questions (questionnaire) made under the guidelines of disaster preparedness made by BNPB and the Ministry of National Education based on Research objectives and is filled by respondents.

### ***Data Analysis***

Data is analyzed by using the IBM SPSS Statistic 22 program. The analysis used are univariate analysis and bivariate analysis (Wilcoxon and Mann-Whitney Test).

## **RESULTS**

The results of the study based on table 1 showed the respondents of the intervention group dominated by women of 28.6%, based on the age of the group was dominated by the age of 10 years at 22.9%, mostly from class IV to as many as 13 students (18.6%), parents' work

most students are entrepreneurs who are as many as 20 students (28.6%), respondents who have been informed about the earthquake preparedness of 33 people (47.1%) Whereas that has never been as many as 2 people (2.9%), and the characteristics based on the information source of preparedness in the intervention group is mostly sourced from teachers in schools that are as much as 22.9%.

In the control group (table 1) is also dominated by women of 34.3%, then dominated by 11-year-old students as much as 20%, most students also come from class IV, that is as many as 16 students (22.9%), the work of parents is also dominated by The self-employed 45.7%, who had been informed about the earthquake preparedness of 19 people (27.1%) and that has never been as much as 16 people (22.9%), while the characteristics based on the information sources in this group most of the information comes from the Meteorological Agency, Climatology and Geophysical (BMKG) that is as much as 18.6%.

Wilcoxon test results in table 2 showed that there was an increase in the mean value of knowledge of earthquake preparedness from pre-test (10.31), post-test 1 (13.86) and post-test 2 (14.80) on the intervention group after the simulation and picture book media. The test result statistic on the intervention group obtained the value  $p = 0.000$  ( $p < 0.005$ ) indicates that there is a significant difference in the mean scores of knowledge at the time of the pre-test and post-test 2, so that it can be concluded that there is a simulated earthquake



impact and picture book media against the respondents' knowledge of earthquake preparedness. The Mann-Whitney test results in table 3. That aims to see the difference in the respondent's knowledge score in the intervention

group and the control group indicate that when the pre-test is obtained the value  $p = 0,962$  indicating that there is no significant difference in average knowledge score respondents between intervention groups.

**Table 1. Distribution group intervention and control groups**

Characteristics	Intervention Group		Control Group	
	n	%	n	%
<b>Gender</b>				
Female	20	28.6	24	34.3
Male	15	21.4	11	15.7
<b>Age</b>				
9 years	2	2.9	11	15.7
10 years	16	22.9	5	7.1
11 years	10	14.3	14	20
12 years	7	10	5	7.1
<b>Class</b>				
IV	13	18.6	16	22.9
V	12	17.1	12	17.1
VI	10	14.3	7	10
<b>Parental work</b>				
Civil servant	9	12.9	1	1.4
Honorary officer	4	5.7	1	1.4
Private employee	2	2.9	1	1.4
Entrepreneur	20	28.6	32	45.7
<b>Whether ever get information on earthquake preparedness</b>				
Yes	33	47.1	19	27.1
No	2	2.9	16	22.9
<b>Earthquake Preparedness Information Resources</b>				
Teacher	16	22.9	0	0
TV	6	8.6	6	8.6
BMKG	0	0	13	18.6
Friend	1	1.4	0	0
Family	5	7.1	0	0
Media social	4	5.7	0	0
Other	1	1.4	0	0



**Table 2. The knowledge score of respondents to the intervention and control group during pre-test. Post-test 1 and post-test 2**

Statistic value	Knowledge score		<i>p-value</i>
	n	Mean	
<b>Intervention group</b>			
Pre-test	35	10.31	
Post-test 1	35	13.86	0.000
Post-test 2	35	14.80	
<b>Control group</b>			
Pre-test	35	10.40	
Post-test 1	35	12.43	0.000
Post-test 2	35	13.20	

**Table 3. The difference in the respondent's knowledge score in the intervention and control group during pre-test. Post-test 1 and post-test 2**

Knowledge	Statistic value		<i>p-value</i>
	n	Mean	
<b>Pre-test</b>			
Intervention	35	10.31	
Control	35	10.40	0.962
<b>Post-test 1</b>			
Intervention	35	13.86	
Control	0	0.0	0.001
Control	35	12.43	
<b>Post-test 2</b>			
Intervention	35	14.80	
Control	35	13.20	0.000

and control groups. While the statistical test results at post-test 1  $p = 0.001$  and post-test 2 are obtained the value  $p = 0,000$  ( $p < 0,005$ ) indicating that there is a significant difference in average

respondent knowledge score between the intervention group and the control group.

## DISCUSSION

Based on the results of the study that education with simulation methods and picture book media affects on students' knowledge of earthquake preparedness. This is shown by the increased knowledge of students before and after intervention.

The effect of simulation on knowledge in accordance with the research conducted by Adeyemi (2011) in Nigeria showed that students given simulation games have a higher average knowledge than the giving of brainstorming. The same is pointed out by Lindell et al (2015) and Oral et al (2015) stating that those involved in earthquake hazard exercises have higher knowledge than those not.

Emami (2015) also showed that students' understanding of earthquakes has increased after being given a simulation. Finnis et al (2010) conducting research on the level of knowledge, perception and disaster preparedness applications in the child in Taranaki, New Zealand, showed that there is a significant difference in knowledge score about self-rescue behavior when Disaster between respondents who have been getting disaster education exercises with the ones that have never been.

Terpstra (2011) stated that having experience in the actions of previous disaster preparedness will strengthen the motivation to behave in subsequent disaster preparedness. In addition, personal experience will also result in adaptability in preparedness so that it can know the exact action that will be carried



out in subsequent disasters (Mulilis et al., 1997; Karanci et al., 2005). So that disaster preparedness education can make students know what actions to take before, during and after the earthquake.

Syuaib (2014) also concluded that simulated learning strategies provide opportunities for students to explore and improve their knowledge of natural disasters. Stewards et al (2007) also stated that simulation has a role in disaster management, as it can measure the readiness of a person in the face of disaster.

During the simulation process the children look passionate and enthusiastic to follow simulation activities, this is because the simulation process is fun so that the message conveyed is more easily accepted by students. Bandrova et al (2015) that shows that the presentation of information with simulated training and entertaining games makes children active in education activities. Putra (2014) also shown that when direct practice of disaster mitigation is seen children are so pleased that it can quickly absorb the knowledge delivered, and the children can easily understand what actions are performed if there is a disaster in the future.

The successful education with disaster simulation applied to elementary school children has been proved by the Japanese. According to the Japanese government that education brought to the education sector has not only impacted the school but also has an impact on the whole community. Surveys conducted by Katada et al (2016) show that a disaster simulation exercise that was conducted repeatedly in the event of no disaster has

successfully saved the 3,000 school children who survived the earthquake and the big Tsumani that struck Kamaishi Even from nearly 1,000 victims were only 5 school-age children who died. This suggests that disaster education is crucial to reducing risk caused by disasters.

In addition to the appropriate teaching methods, the success of the educational process is also supported by the teaching media used. The proper use of media enlarges the meaning and function of supporting the effectiveness and efficiency of the educational process. One of the learning media that is suitable for the learning of elementary school students is picture books, because picture books can help develop children's emotions, get fun and stimulate children's imagination (Nurgiyantoro, 2015). Therefore, the knowledge of respondents can increase because the picture book can inspire the students to find out the information contained in the picture book.

## CONCLUSION AND SUGGESTION

We conclude that the education of earthquake disaster preparedness with the simulation method and picture book media affects on the level of knowledge of elementary school students in Majene County. A fun simulation method can make education preparedness can be absorbed by the students well as well as the use of picture book media that can stir the students ' imagination about preparedness, hoping that the knowledge gained Students can be used in the face of the next earthquake disaster. Therefore, it is expected that the government to make disaster



preparedness become one of the compulsory curriculum in elementary school, so that information about disaster preparedness can be thoroughly. In addition, the Government should work together with the school and BNPB to conduct an education in earthquake preparedness.





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# Health Education On TKBM Knowledge and Attitude About HIV And AIDS In The Gorontalo Port

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## ABSTRAK

HIV and AIDS cases continue to increase every year and potentially increase in one of the key populations of loading and unloading workers in the port environment so that health and education methods that focus on promotion and prevention are needed to increase knowledge and attitudes. This study aims to determine the effect of health education methods on TKBM knowledge and attitudes about HIV and AIDS in Gorontalo Port. This study used a quasi-experiment with a randomized pre-test post-test design. The sample was taken by simple random sampling as many as 40 respondents divided by 20 respondents for socialization and brainstorming interventions. Data collection using questionnaires and interviews. Data is not normally distributed so it uses the Wilcoxon and Mann Whitney tests. The results showed that the characteristics of the respondents were in the most age group were 36-45 years with 55.5% with 92.5% male gender, married 95%, elementary school education 75% and average monthly income under 2 million Rupiah as much as 95%. The increase in the average score of knowledge (29.0 to 41.45) and attitudes (30.10 to 43.30) about HIV and AIDS before and after intervention in the socialization group, while knowledge (28.50 to 43.05) and attitudes (30.70 to 43.80) in the brainstorming intervention group. There were differences before and after the intervention method of socialization and brainstorming on Knowledge ( $p = 0,000$ ) and Attitudes ( $p = 0,000$ ) TKBM about HIV-AIDS, but there was no difference in the average score between the two groups with the p-value ( $p > 0, 05$ ). The method of socialization and brainstorming is an option in increasing knowledge and attitude as a primary prevention effort, so it is recommended to become a program.

## INTRODUCTION

AIDS can be defined as a syndrome or a collection of symptoms of the disease with characteristics of severe immune deficiency, and is a late-stage manifestation of HIV infection. Acquired

Immune Deficiency Syndrome (AIDS) caused by the virus Human Immunodeficiency Virus (HIV), where the virus attacks white blood cells or the human immune system, so that people



affected by this disease cannot fight various types of diseases that attack their bodies (Desmon, 2015).

In the report on the situation of the development of HIV and AIDS and Sexually Transmitted Infections (STIs) of the Republic of Indonesia Ministry of Health 2018 Second Quarter, stating that HIV infection in Indonesia was found to be a case of HIV infection until July 2018 (301,959). This has increased in the last 3 years, in 2016 as many as 41,250 cases and increased in 2017 as many as 48,300 cases, July 12 2018 reported reaching 21,336. Whereas for AIDS until July 2018 there were 108,829 cases reported. In 3 years, magic tends to fluctuate down to 10,146 cases in 2016, and in 2017 it dropped to 9,280 cases. As of July 2018 there were 6,162 cases (Kemenkes RI, 2018).

Gorontalo Province, from the recapitulation of the number of HIV and AIDS cases, the incidence has increased every year. In 2016 the HIV prevalence of 0.7 / 1,000 population increased in 2017 to 5.1 / 1,000 population. Then reported until July 2018 has reached 9 cases. Whereas for AIDS in 2016 there were 3.7 / 1,000 residents and increased in 2017 to 6.1 / 1,000 residents. As many as 30 cases have been reported up to July 2018 (Kemenkes RI, 2018). HIV is a disease that attacks the body's immunity with sexual behavior as the main transmission of transmission, especially sexual behavior in risk groups. TKBM (Loading and Unloading Workers) is one group of high-risk men based on a work approach according to the Integrated Biological and Behavior Survey.

The survey in Kalimas Port Surabaya was conducted to determine the relationship between characteristics, knowledge, and attitudes of TKBM with sexual risk behaviors for HIV transmission (Margawati et al., 2017). According to Integrated Biological and Behavior Survey data, population groups at risk of HIV transmission are women direct and indirect sex workers, IDUs, transgenders, MSM, teenagers and risky men including motorbike taxi drivers, public transport drivers, Shipmen, Labor and Personnel Loading and Unloading Work (TKBM) in ports (Margawati et al., 2017). The port is an area that has a large potential in the spread of HIV and AIDS cases. According to a preliminary survey with the Kalandara Non-Governmental Organization that runs the HIV and AIDS prevention and control program at the Tanjung Emas Port in Semarang in 2014, one of the port workers who has a high risk of HIV and AIDS is loading and unloading labor because access to sex services is easy, regular working hours and a daily wage system. In addition, there is access to sexual transactions around the port, namely entertainment venues in the port area (Mardalina, 2015).

Health education can be delivered formally or informally during daily interactions in increasing health behaviors at risk, one of that is knowledge about HIV and AIDS literacy (Taher et al., 2013). According to Notoatmodjo (2010) knowledge can be improved through two ways, through methods of health education and coercion/ pressure. As for health education methods are still the main alternatives in efforts to increase



knowledge and attitudes related to sexual behavior (Kasman et al., 2017).

There are two types of educational methods that are used to increase knowledge and attitudes, namely the active method and the socratic method. Didactic method is a one-way teaching learning method where socialization is one type of method that can be used and recommended in the program. Thus the socratic method is a two-way teaching and learning method where the brainstorming method is easier and more effectively implemented. Each method has advantages that are easy to implement and effective in the risk group. Socialization and brainstorming are two methods that can be recommended to improve health knowledge aimed at achieving behavioral change (attitudes of individuals, families and communities) in an effort to realize health degrees optimally (Notoatmodjo, 2010).

Based on the above background, it is considered necessary to conduct research that will look at the effect of the method of health education on the knowledge and attitudes of the Dismantling Workers (TKBM) about HIIV and AIDS specifically in Gorontalo Harbor. This research with promotive and preventive related focus methods was chosen to be carried out, so that later it was hoped that it could be input into information delivery activities especially to port communities (one of them TKBM) in an effort to prevent the main transmission of HIV and AIDS transmission to risk groups in Gorontalo Port.

## **METHOD**

### ***Research Design and Location***

This research was conducted in Gorontalo Port, Gorontalo Province. Quasi-experimental research design with randomized pre and post-test design.

### ***Population and Sample***

The population in this study were all members of Gorontalo Port TKBM while the sample in this study was a portion of the total population of 40 respondents. Sampling for the intervention group was carried out by simple random sampling, with each intervention group as many as 20 people.

### ***Data Collection***

The sample was divided into two groups (group socialization method and group brainstorming method) that were active and fulfilling Gorontalo Gorontalo TKBM members (age > 17 years, able to communicate well, and able to read and write) then given a reading sheet, filling in the next pre-test questionnaire intervention and post-test were carried out at a distance of thirty (30) days after the intervention.

### ***Data Analysis***

The unit of analysis, that is all variables inherent in the observation unit of the dependent variable, are TKBM knowledge and attitudes about HIV and AIDS in Gorontalo Port. While the independent variable is the method of health education socialization and brainstorming. The data obtained were not normally distributed so that the non-parametric test was used, namely the Wilcoxon-test and the Mann-Whitney Test.



## RESULTS

Table 1 shows that the average age of respondents in the two study groups was in the 36-45 year age group in the socialization intervention group as much as 12/20 and the 9/20 brainstorming intervention group, the sexes in the two study groups were dominated by men respectively 19/20 for brainstorming groups and 18/20 for socialization

groups. The marital status of the two groups intervened, both socialization and brainstorming, that were more married each 19/20. The last education was more in elementary school education, namely the brainstorming group as much as 16/20 and in the socialization group as much as 14/20.

**Table 1. Characteristics of Respondents in Intervention Socialization and Brainstorming**

Characteristics of Respondents	Socialization		Brainstorming		Total	
	n	%	n	%	N	%
<b>Age (year)</b>						
26 - 35	2	5,0%	1	2,5%	3	7,5%
36 - 45	12	30,0%	9	22,5%	21	52,5%
46 - 55	6	15,0%	8	20,0%	14	35,0%
≥ 56	0	0,0%	2	5,0%	2	5,0%
<b>Gender</b>						
Male	18	45,0%	19	47,5%	37	92,5%
Female	2	5%	1	2,5%	3	7,5%
<b>Marital status</b>						
Married	19	47,5%	19	47,5%	38	95,0%
Single	1	2,5%	1	2,5%	2	5,0%
<b>Last education</b>						
No school	1	2,5%	1	2,5%	2	5,0%
Elementary school	14	35,0%	16	40,0%	30	75,0%
High school	5	12,5%	3	7,5%	8	20,0%
<b>Income</b>						
< 2 million	19	47,5%	19	47,5%	38	95,0%
≥ 2 million	1	2,5%	1	2,5%	2	5,0%
<b>Knowledge of HIV and AIDS</b>						
Good	0	0,0%	0	0,0%	0	0,0%
Enough	20	100%	20	100%	40	100%
Less	0	0,0%	0	0,0%	0	0,0%
<b>Attitudes on HIV and AIDS</b>						
Good	0	0,0%	0	0,0%	0	0,0%
Enough	19	47,5%	20	50%	39	97,5%
Less	1	2,5%	0	0,0%	1	2,5%



**Table 2. Knowledge Differences, Respondents' Attitudes Before and After Intervention**

Statistical Results	Knowledge		p-value	Attitudes		p-value
	Before	After		Before	After	
<b>Socialization</b>						
<i>Min - Max</i>	22 - 34	30 - 47	0,000	25 - 41	38 - 48	0,000
<i>Mean ± SD</i>	29,0 ± 3,4	41,5 ± 4,4		30,1 ± 3,7	43,3 ± 2,6	
<b>Brainstorming</b>						
<i>Min - Max</i>	23 - 33	40 - 48	0,000	25 - 34	41 - 47	0,000
<i>Mean ± SD</i>	28,5 ± 3,0	43,0 ± 1,7		30,7 ± 2,4	43,8 ± 1,4	

While the amount of income per month, almost all respondents have income of less than 2 million with details in the socialization group and brainstorming at 19/20 respectively. The results also show that at the pre-test the respondents' knowledge in both groups was in sufficient category (100%) while the respondent's attitude was 5% of respondents in the attitude category that was lacking.

Table 2 showed that the average value and standard deviation of the knowledge score before and after the intervention is 29.0 + 3.4 to 41.5 + 4.4 (method of socialization) and of 28.5 + 3.0 to 43.0 + 1.7 (brainstorming

method) with a value of p-value of knowledge each of  $0,000 < 0,05$ , that means there is a significant difference in knowledge before and after the intervention of socialization and brainstorming. While the average and standard deviation of attitude scores before and after the intervention amounted to 30.1 + 3.7 to 43.3 + 2.6 (method of socialization) and by 30.7 + 2.4 to 43.8 + 1.4 (method of Brainstorming) with attitude value p-value  $0,000 < 0,05$ , that means there are significant differences in attitudes before and after the intervention of socialization and brainstorming.

**Table 3. Differences in the Value of Knowledge and Attitudes of Respondents in the Socialization and Brainstorming Groups Against HIV and AIDS Prevention**

Statistical Results	Socialization <i>Δ Mean ± SD</i>	Brainstorming <i>Δ Mean ± SD</i>	p-value
<b>Knowledge</b>			
<i>Pre-test vs Pre-test</i>			0,521
<i>Post-test vs Post-test</i>	12,45 ± 1,07	14,55 ± 1,42	0,397
<b>Attitudes</b>			
<i>Pre-test vs Pre-test</i>			0,194
<i>Post-test vs Post-test</i>	13,2 ± 1,15	13,1 ± 0,99	0,739





Table 3. Shows that the average value of changes in knowledge scores on the socialization method between pre-test and post-test was 12.45 with a standard deviation of 1.07, and attitude scores of 13.2 with a standard deviation of 1.15. While the average value of changes in knowledge scores in the brainstorming method between pre-test and post-test was 14.55 with a standard deviation of 1.42, and an attitude score of 13.1 with a standard deviation of 0.99. The statistical results also show that the comparison of knowledge and attitudes before each intervention is obtained that the value of p-value of socialization ( $p = 0.521$ ;  $p = 0.194$ ) while the comparison of knowledge and attitudes after each intervention p-value is obtained ( $p = 0.397$ ;  $p = 0.739$ ) that means the value of p-value  $> 0.05$ . Then it can be concluded that there were no significant differences between the two groups in increasing the knowledge and attitudes of TKBM about HIV and AIDS

## DISCUSSION

This study showed that there are differences in knowledge and attitudes about HIV and AIDS in the loading and unloading labor force (TKBM) in Gorontalo Port that were significant before and after the intervention both in the treatment group socialization method and in the brainstorming method group. However, there were no differences in the comparison of mean values between the two treatment groups.

The method of health education through the method of socialization and brainstorming has a significant effect in increasing knowledge and attitudes about

HIV and AIDS in the loading and unloading labor force. According to Kusumawardani et al (2012) that the socialization of increasing knowledge in the less category increased to the medium category to the 30th day after intervention. This is reinforced again in his research Muliana (2014) stated that socialization increases knowledge and attitudes where the attitude of respondents in the experimental group in the post-test distribution increased to a good attitude.

The method of socialization is a process of planting or transferring habits or values of rules from one generation to another in a group or society. Socialization is a general concept that can be interpreted as a process in that we learn through interaction with other people, about how to think, feel, and act, that are all things that are very important in producing effective social participation. Socialization is a process that continues to occur throughout our lives. And socialization can also be interpreted as any activity intended to notify persuading or influencing the community to continue to use the products and services produced (Bakara et al., 2013).

A number of sociologists refer to socialization as a theory about the role (role theory). Because the socialization process is taught the roles that must be carried out by individuals. In this research, socialization is able to provide skills to someone to be able to live in a community. By giving socialization to individuals, the individual can ultimately easily learn to socialize to the community, so that the individual can be easily accepted by the community. Then develop the ability of someone to communicate





effectively. With socialization, individuals can get used to communicating with the outside world and society. Develop one's organic functions through proper introspection. By socializing, an organic function in the body / soul of a person will be trained properly, so that individuals can easily gather in the community. And, with good communication, these individuals can easily live side by side in society. And instill values and trust in someone who has a basic task in society. With socialization, individuals can easily get confidence because they have good communication in the community. With the existence of trust and communication, individuals can easily socialize with the community.

While brainstorming method is a creativity technique that seeks to find a solution to a particular problem by gathering ideas spontaneously from group members. This is in line with the research conducted by Maimun et al (2017) that showed a difference in attitudes in the brainstorming group before and after the intervention with the results of measuring scores of knowledge and attitudes. There are differences in attitudes about reproductive health in the brainstorming group before and after the intervention with the results of the score measurement, this shows that there is an increase in respondents' knowledge and attitude scores after receiving treatment from brainstorming facilitators (Handayani et al., 2009; Yanti et al., 2014; Ratnaningsih et al., 2015).

The brainstorming method has proven its benefits as a tool to explore information about knowledge and

attitudes to achieve goals. This method can be more in digging up more respondent information. The implementation of the brainstorming method can be guided by a facilitator who facilitates the process of discussion to run smoothly. The facilitator can act as a resource for the participants. A facilitator must have the ability to communicate well, listen to the opinions of each member of the discussion well, conclude their opinions, explore further information, and be able to make the atmosphere more familiar and comfortable. The facilitator must also respect the attitudes, opinions and feelings of each member of the discussion.

The brainstorming method is a method of socratic health education that is a method based on two-way or two-way traffic methods. In this method, both facilitators and participants are equally active, so participants can be active and creative. The brainstorming method is to provide the opportunity for participants to be able to display independence and self-direction, have openness and wholeness in choosing the best alternative actions, able to express opinions and actualize themselves in solving a problem and be able to respect the opinions of others. This brainstorming method gives participants the freedom to express their arguments and solve a problem and be able to respect the opinions of others. This method aims to gather ideas or opinions in order to determine and select various statements in response to questions related to learning (Sihite et al, 2017).

Rosenberg's theory states that knowledge and attitudes are related consistently. If cognitive ability



(knowledge) changes, it will also be followed by a change in attitude (Hutauruk, 2009). In accordance with the theory, there was an increase in the score of the knowledge and attitudes of the respondents in this study after the intervention was done both the socialization method and the brainstorming method.

## **CONCLUSION AND SUGGESTION**

Based on the results of the research that has been carried out, it can be concluded that there are differences in the average score of knowledge and attitudes before and after the intervention method of socialization and brainstorming at the loading and unloading labor force on HIV and AIDS in Gorontalo Port but no difference in the average between the two treatment groups so that methods of socialization and brainstorming can be used in providing education in improving knowledge and attitudes about HIV and AIDS. In accordance with field observations, researchers suggest that health education on HIV-AIDS using socialization and brainstorming methods can be used as an option in increasing knowledge and attitudes as a primary prevention step, so it is good to be included in program recommendations both formal and informal activities.



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# Examination Of Physical Environment and Staphylococcus Aureus In Hasanuddin Makassar University Hospital

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## ABSTRAK

Humans need some main material for survival, one of which is air. The physical environment and air quality of a hospital room that does not meet health requirements can cause health problems for patients, workers who work in hospitals or visitors to hospitals. Be aware of the effects that bacteria will cause in the air on the environment and human health. So it is necessary to do a physical examination so that prevention and control efforts can be carried out properly. This study aims to determine the quality of the physical environment (temperature, humidity, and lighting) and identification of Staphylococcus aureus air bacteria in three rooms on an outpatient installation at Hasanuddin University Hospital. This research is an observational elite with cross-sectional approach. The population this study were all Staphylococcus aureus bacteria identified in the cup. The method of this research is direct measurement at the location of the study consisting of identification of the presence of Staphylococcus aureus bacteria, temperature, humidity, and lighting. Sampling was done by researcher own, Staphylococcus aureus bacteria examination carried out by a third expert Bacteriological Laboratory Medical Faculty of Hasanuddin Makassar. The results of this study indicate the quality of the physical environment of temperature and humidity is still not appropriate if you look at the standard requirements for environmental health of the Hospital, but for the lighting parameters are in accordance with the standards. Then to identify the bacteria showing the results of the entire room, there are Staphylococcus aureus bacteria. Conclusion that the examination of the physical environment and identification of air bacteria in Hasanuddin University Hospital has not met the standards and the presence of Staphylococcus aureus bacteria. Recommended that the Hospital be more able to apply disinfectant, especially in rooms in outpatient installations.



## INTRODUCTION

The realization of the quality of a healthy environment is an essential part of the health sector. Air as an important environmental component in life needs to be maintained and upgraded so that it can provide support for living things to live optimally (Wulandari, 2013). Humans need some main material for survival, one of that is air. Air is an important component of breathing for the survival of humans and various other living things. The chemical, biological and physical composition of air has a direct effect on the quality of breathing (Abdullah et al., 2011).

Air is grouped into outdoor air and indoor air. Indoor air quality greatly affects human health, because almost 90% of human activity is indoors (Fitria et al., 2008). Biological air pollution is very important, especially if you are in Rum Hospital (Dacarro et al., 2003). Sanitation in hospitals that is an effort to improve health and control the environment can risk causing disease, so one of the scope of hospital sanitation activities is controlling physical environmental factors including temperature, humidity, and lighting in the hospital (Muntaha et al., 2016). One of the health facilities responsible for improving health status is the Hospital. Hospitals are not only a place to seek healing, but also are a source of various diseases that feel from patients and visitors with career status, through the intermediary pathogenic bacteria in the air (Dwi, 2016).

Transmission of microorganisms to humans occurs with certain mechanisms, for example with wind

blows, water droplets or et droplets, splashes of coughing or sneezing, conversations, and contact with the floor surface (Abdullah et al., 2011). The management of the room and the hospital environment must also be kept clean, moisture, irradiation and ventilation, and need to periodically monitor the presence of room bacteria, especially in outpatient installations because it is a potential unit of transmission and at risk of causing infection quickly (Harun et al., 2017). The microorganisms that roam most in the air of the hospital environment are bacteria and fungi (Palawe et al., 2015).

The presence of microorganisms in the room is also influenced by temperature, humidity, lighting (Rachmatanri, 2015). This is because each microorganism has an optimum temperature. Where at this optimum temperature, microbial growth takes place quickly. Temperature affects microbial cell division. The growth of microorganisms occurs at temperatures around 30oC. Then at a temperature that is not in accordance with the needs of bacteria can cause cell damage (Waluyo, 2009). Similar to the level of humidity needed by bacterial microorganisms in the growth process generally requires high humidity, the required humidity is above 60% (Jawetz, 2005). As well as lighting in the room can affect the growth of microorganisms or bacteria. The presence of indoor light sources can inhibit bacterial growth.

Hospital air quality that does not meet health requirements can cause health problems for patients, workers who work in hospitals and visitors to



hospitals (Depkes RI, 2002). Research earlier about the numbers of germs and bacteria Studies conditioned by Shiferaw et al (2016) at the Teaching Hospital in Ethiopia East Africa, showed that of the 29 rooms were checked, 182 identified bacteria with an average of 3.42 species of bacteria/living room with the highest number of germs is 12053 - 18311 CFU/m<sup>3</sup>. The dominating bacterial species are *Staphylococcus aureus*, *Pseudomonas* spp, *Escherichia coli*, and *Salmonella* spp.

Nosocomial infection control is primarily directed at protecting patients, given that patients who are treated are generally more vulnerable or weak physically and psychologically due to their illness (Raharja, 2015). Nosocomial infections in a hospital can occur in a number of ways, one of that is through water-borne, namely through air and inhalation (Lantang, 2012). Hasanuddin University Hospital is a hospital located in Makassar-South Sulawesi, a hospital under the Ministry of Research, Technology and Higher Education. And as a health service institution that organizes individual services in full, that provides inpatient, outpatient, emergency and other services.

Based on reported data on the results of microbiological tests on November 29, 2018 on seven rooms at Hasanuddin University Hospital, it was shown that Identification of bacteria, several bacteria have been identified, namely *Staphylococcus aureus*, *Acinetobacter* sp, and *Pseudomonas* sp. So it is important to research the air in the room at the hospital. Recognizing

the effects that will be caused by germs and bacteria in the air on the environment and human health. So it is necessary to examine the physical environment and identify the presence of bacteria so that prevention and control efforts can be applied properly.

## **METHOD**

### ***Research Design and Location***

This research was conducted at Hasanuddin University Hospital in three rooms on outpatient installations, namely poly room 1 (Intern), poly room 2 (ENT), and poly room 3 (General). This is because outpatient installation is a treatment/treatment service that almost every day has quite a lot of patient visits with various disease complaints and has patients with different ages, and vulnerable immune systems ranging from toddlers to older people.

### ***Population and Sample***

The population in this study was *Staphylococcus aureus* in three rooms, namely room 1, room 2, and room 3 in the outpatient installation in 2019 identified in the cup. The sample of this study was 3 cups as a medium for identification of *Staphylococcus aureus* bacteria and 3 rooms as physical examination sites (temperature, humidity, and lighting).

### ***Data Collection***

The variables studied in this study were physical parameters (temperature, humidity, and lighting) and *Staphylococcus aureus* bacteria. The method used in sampling by using the metode accidental sampling members of the population, namely how to



obtain a sample by chance or bacteria taken in conducting the research. The process of measuring physical parameters (temperature, humidity, and lighting) and sampling of bacteria carried by the researchers themselves, but *Staphylococcus aureus* bacteria sample inspection carried out by a third expert Bacteriological Laboratory Medical Faculty of Hasanuddin Makassar. Percent officer has previously been coordinated with relevant parties in order to obtain accurate results.

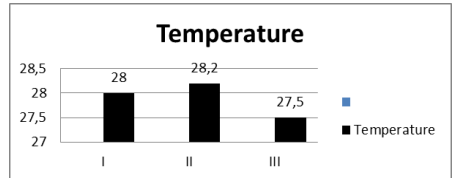
**Data Analysis**

The analyst is data for bacterial examination conducted by the Laboratory of Bacteriology Medical Faculty of Hasanuddin University Makassar. Data that has been obtained later univariate analyzed to see the distribution of each variable, namely physical quality (temperature, humidity, and lighting) and the presence of bacteria in three rooms. Furthermore, the data were analyzed bivariately to determine the relationship between variables with the person correlation test.

**RESULTS**

Figure 1 showed that the quality of the physical environment in temperature p has different spaces. It can be seen that the s hoot highest in room 2 with a value of 28,2 °C, and the lowest temperature a da in room 3 in the amount of 27,1°C, It can be concluded that when viewed on a standard health requirements of the hospital environment by Decision RI Minister of Health No. 1024 /Menkes/SK/X/2004

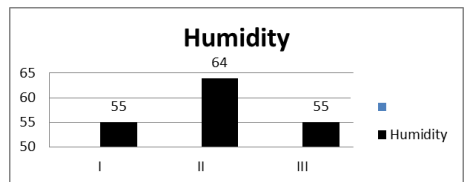
the temperature in the room is still ses three uai that is in the range of 27.1°C to 28.2°C should range between 22 °C-24 °C.



**Figure 1 . Physical Examination of Temperature in Three Rooms in an Outpatient Installation**

*\* The highest temperature percentage is in room 2 of 28,2 oC.*

Figure 2 shows that the quality of the physical environment of humidity, in each space is different. It can be seen that the highest humidity exists in the second with a value of 64%, and lowest humidity is in the room 2 and 3 by 55%. So that it can be concluded that the humidity in rooms 1 and 3 are appropriate, but in room 2 the humidity level is not appropriate if you look at the hospital's environmental health requirements according to



**Figure 2 . Physical Moisture Examination in Three Rooms at Outpatient Installation**

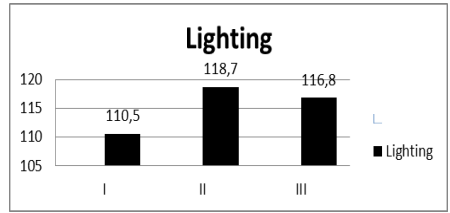
*\*Percentage the highest humidity is in room 2 by 64 %*





Decree of the Minister of Health of the Republic of Indonesia No. 1024/MENKES/SK/X/2004, that is in the range of 55 % to 64%, whereas n should be in the range of 40% -60%.

Figure 3 showed that the quality of the physical environment of lighting, there are different spaces. It can be seen that the lowest lighting exists in the first with an average score of 110,5 Lux and the highest illumination in the room 2 at 118,7 Lux. So that it can be concluded that when looking at the hospital's environmental health requirements according to Decree of the Minister of Health of the Republic of Indonesia No. 1024/MENKES/SK/X /2004 are appropriate, ranging from 100 Lux - 200 Lux.



**Figure 3. Physical Examination of Lighting in Three Rooms at Outpatient Installation**

\* The highest percentage of lighting level is in room 2

Table 1 showed identification of the presence of *Staphylococcus aureus* bacteria in each room. It can be seen in the room 1, room 2, and 3 results are positive or indoor airborne bacteria *Staphylococcus aureus* contained in each test chamber.

**Table 1. *Staphylococcus aureus* air bacterial examination results In Three Rooms in an Outpatient Installation**

Number of Test Rooms	<i>Staphylococcus aureus</i> Air Bacteria Inspection Results for Each Room		
	I	II	III
Room 1	Positive	Positive	Positive
Room 2	Positive	Positive	Positive
Room 3	Positive	Positive	Positive

\* It was identified that *Staphylococcus aureus* air bacteria are good in three rooms in outpatient installations.

**Table 2. Relationship Test Results Between Physical Environment (temperature, humidity, lighting) With *Staphylococcus aureus* Bacteria**

Variable	<i>Staphylococcus aureus</i> air bacteria	
	n	P-Value
Temperature	3	0,001
Humidity	3	0,001
Lighting	3	0,001



Table 2 showed the relationship between the physical environment and the presence of *Staphylococcus aureus* bacteria use the person correlation test. It can be seen that the p-value (0.001) then it can be interpreted that there is a relationship between physical environmental parameters (temperature, humidity, lighting) in the presence of *Staphylococcus aureus* bacteria.

## DISCUSSION

Based on the results of the study it was found that the quality of the physical environment (temperature, humidity, lighting) and *Staphylococcus aureus* bacteria. The three rooms on the installation of the outpatient sample in this study exceeded standards per the terms poor living conditions Health's hospital environment. This is evidenced by the presence of bacteria in each room that is influenced by the contribution of the physical environment actor. Conditions in temperature, humidity and air lighting allow the germs to remain in the air. Each micro-organism has a different optimum temperature to grow and develop.

The results of temperature measurements during the study showed that the average optimum temperature was in the range of 27,5°C to 28,2 °C. Germs that grow and develop in the temperature range are included in the group of mesophils (microorganisms that like at moderate temperatures) with optimal growth temperatures between 20°C to 45°C. then for indoor air humidity levels in this study that is in the range of 55% to 64%. This is in line

with the research of Fitria et al (2008) that the high relative humidity of the air can increase the growth of microorganisms. These microorganisms can enter the body through the air.

In addition, high humidity can also cause the nasal mucous membranes to become dry, making it less effective in blocking microorganisms. According to Jawetz (2005) the level of humidity needed by microorganisms in the growth process generally requires relatively high humidity above 60%. So that the higher humidity in the room causes the presence of *Staphylococcus aureus* bacteria. The level of indoor lighting in this study ranged from 100 Lux to 200 Lux. Low levels of lighting in the room can affect the growth of bacterial microorganisms, lighting is less a condition favored by germs and bacteria because it can grow well in dark conditions. The existence of high light sources in the room can inhibit the growth of germs and bacteria. So the lighting must be good both day and night.

While the presence of pathogenic bacteria, namely *Staphylococcus aureus* in this study before being given treatment because these bacteria are normal flora in humans. According to Jawetz (2005) Colonies of *Staphylococcus aureus* occupy the anterior part of the nose and are present in human skin. This species is pathogenic and causes a number of infections that attack healthy individuals. So this is in line with Wikansari's (2012) study that said that *Staphylococcus aureus* bacteria can also be found in clothing, in the environment around the hospital, and can also be



through air entering through the door of the room.

## CONCLUSION AND SUGGESTION

It was concluded that the quality of the physical environment (temperature, humidity, and lighting) in this study also affected the number of air germs and the presence of *Staphylococcus aureus* bacteria, high temperature and air humidity can increase the growth of germs and bacteria, and the level of room lighting

is fewer conditions favored by germs and bacteria. Therefore, it is recommended that the Hospital be more able to apply disinfectant treatment, especially in the outpatient installation room to destroy airborne bacteria in space, so as not to increase and still meet the hospital's environmental health requirements. and can improve the quality of the physical environment with regular and regular monitoring.



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